

AT SANDVIK WE PUT SAFETY FIRST

With continued demand from mining companies to ensure safety and increase productivity, Sandvik rock tools are committed to providing the support needed – through safe products and product information.

Every site must work with environmental health and safety (EHS) Regulations. EHS procedures should be developed specifically for the operation. All those involved should collect and apply those procedures throughout their work, while constantly examining if they are adequate enough or need modifications. A methodology of risk assessments should be employed.

PERSONAL SAFETY MEASURES

APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) SHOULD BE WORN (E.G.):

- ▶ Safety helmet
- ▶ Hearing protection
- ▶ Safety glasses
- ▶ Protective and high visibility clothing
- ▶ Safety boots

TAKE 5 MINUTES

Consider safety when planning your Schedule. Taking five minutes before the start of a task to consider the possible hazards, perform a quick risk assessment and then plan and apply appropriate control measures is a quick and effective way to prevent incidents that can cause injury and environmental damage.

Plan, sequence and determine the resources required for each step of the job. Consult available procedures.

Identify potential hazards, determine the risk of the hazards and consider appropriate measures to control the hazards. Ensure you have the correct resources to perform the task.





RECOMMENDED SAFETY PROCEDURES

LIFTING PROCEDURES

Use safe and correct lifting practices while working with heavy items. Consider body position, awkwardness of the item and its weight. Are two people required for the lift, is a lifting device necessary?

GRINDING OF BITS

Drill bits have cemented carbide buttons. Cemented carbide is made up of tungsten carbide and cobalt. Grinding buttons will produce dusts or fumes with dangerous ingredients that can be inhaled, swallowed or come in contact with the skin or eyes. Do not breathe dust. Wear protective gloves/protective clothing/eye protection. In case of inadequate ventilation wear respiratory protection. In particular, avoid dry grinding. For more information see page 99.

ASSEMBLY OF BITS

- ▶ Do not touch any equipment whilst it is rotating.
- ▶ The rod rotation must be stopped before installing or removing a drill bit.
- ▶ Follow site instructions for isolation of rotation motors.
- ▶ Beware of pinch points between the bit and the rod.

DRILLING WITH HANDHELD EQUIPMENT

Sandvik rock tools are designed and manufactured to the highest standards. A particular hazard exists with handheld drilling equipment, where if the drill rod breaks it can form an impalement hazard if the broken drill steel protrudes from the hole it was drilling, whilst the driller is pushing towards the broken drill steel.

DISASSEMBLY OF HOT BIT, ROD, COUPLING, SLEEVE, SHANK-ADAPTER AND INTERGRAL STEEL

- ▶ Ensure products have cooled down before disassembling.
- Never work on hot parts.
- Consider appropriate hand protection (gloves) for handling warm parts.



CLEANING OF RODS

A particular hazard exists with cleaning rods if the rods contain explosives. Sandvik rock tools should never be used in a hole that has been filled with explosive.

DEALING WITH WORN PARTS

Worn parts should be removed and disposed of appropriately. Consider recycling the used drill bits. Please contact your local Sandvik Mining representative for support and further information regarding the recycling process.

STORING

All products should be stored in a dry place and in original package until they are required for use.

GENERAL

The products in this catalog are designed for drilling holes in rock and should only be used for this purpose.

Read more about our Health and Safety Information at page 99.



Göran Fredrik Göransson founded Sandvik in 1862.

AS THE WORLD CHANGES OUR VALUES REMAIN THE SAME

With 150 years of history it's not surprising that we have seen many changes in our industry. What hasn't changed is our commitment to our core values Open Mind, Team Spirit and Fair Play. By living our values we are an innovative and growing company, meeting the world around us with an open mind.

We pride ourselves in developing and offering the very best solutions for our customers. A major breakthrough for us here at Sandvik was the integral steel in the late 1940's. Overnight, this material revolutionised rock drilling a hundredfold and significantly improved production as well as performance. This Integral drill steel was the first

product that was based on the new revolutionary material, cemented carbide and is still the single most important material that makes rock drilling effective and profitable for our customers. Today, we continue to conduct business in close cooperation with our customers, based all over the world. We stand by our promise of being a proactive and innovative partner. We accomplish this by always looking ahead, listening to our customers and their market requirements. We follow developments in society and industry, as well as contributing products and solutions to meet demand.

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"In a world where innovation and technology make the difference between good work and great work, being second best just isn't an option for us."

OUR VALUES ARE REPRESENTED IN THE WAY WE DO BUSINESS

Sandvik Mining is a leading global supplier of Rock tools and equipment, service and technical solutions for the mining industry. Our offering covers rock drilling, rock cutting, rock crushing, loading and hauling and materials handling.

OPEN MIND

At Sandvik, we approach the world around us with an open mind to remain a highly innovative and growing company focused on increasing value for our stakeholders. Open Mind invites us to look for innovations and improvements, to value and learn from different perspectives and to take a positive attitude to change. We encourage those who take the initiative and experiment with new ways of working.

▶ TEAM SPIRIT

Within the Sandvik Group, we act together as one team in close cooperation with our stakeholders worldwide. Progress is secured by Sandvik personnel trusting each other as enthusiastic members of a team, with everyone seeking to do their best and showing respect for one another.

► FAIR PLAY

At Sandvik, Fair Play is about taking our responsibilities when conducting business. We comply with the high ethical standards stated in the Sandvik Code of Conduct. This means that our business is based on honesty, integrity and trust. Fair Play also requires us to conduct transparent relations with all of our stakeholders.

Continuous improvement – product quality and service is our only job. We believe "there is no best, only better".

RESEARCH AND DESIGN TAKE THE LEAD IN OUR PRODUCTION

Our rock tools are known to all the main mining customers all over the world.

Our tight focus and continuous development work insure the latest technical solutions for the most demanding rock conditions and for the most powerful rock tools, all for the benefit of our customers.

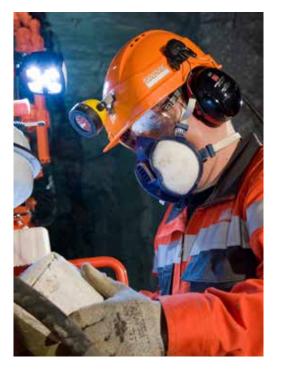
Our products undergo extensive laboratory studies and then, tested fully in the field. Finally evaluated and refined to provide the highest grade of equipment that stands for the Sandvik name.

Our spirit of innovation and high involvement runs through every product. It is preceded by extensive Research & Development. Supported by a worldwide service network offering on-site service, training and round-the-clock support.

Our service-oriented, global organisation is well developed. Sandvik has technical service specialists strategically located around the world to service our customers.







AT SANDVIK SAFETY IS NOT HANDLED LIGHTLY

Safety is also very important for our customers. We are the safe choice for our customers, not only because we lead in safety innovation and functional safety, but also because we do what we promise. In addition to offering our customers' better productivity, Sandvik products and services also enable them to sleep well at night. The reason? Risk is minimised, enabling operations to run smoothly, giving them peace of mind.

WE BRING QUALITY TO EVERY PRODUCT WE DELIVER



A NEW GENERATION IN CEMENTED CARBIDE

With new manufacturing techniques, the XT48 cemented carbide has gained greater density and a more homogenous structure. Toughness has been increased without compromising the exceedingly high wear resistance – making the material stronger, without sacrificing its hardness.



The gauge buttons of a drill bit are exposed to axial forces. Sandvik's former cemented carbides have always been able to handle that type of load with minimal risk of breakage.



When the bit wears, the load angle changes and the risk for button breakage increases. The XT48 cemented carbide has significantly higher resistance to that type failure.

At Sandvik, we take pride in having full control of each processing step and in developing proprietary production processes that further improve our technological capabilities. With production, research and development in-house for the essential key materials for manufacturing rock drilling tools, we continue to develop new products and new cemented carbide grades that enhance our customers' operations through superior performance and reduced costs.

An extensive research project within Sandvik has resulted in a new generation of carbide grades and new larger, stronger, more stable and efficient tools.

This latest generation of carbide grades is manufactured using our own innovative process techniques, with completely new raw materials. With a significantly stronger carbide matrix and a perfect grain size configuration, we are able to deliver superior toughness and high wear temperature resistance to meet the needs of a great number of our customers operations.

SANDVIK GRADE XT48 BIT

- ▶ Optimised cutting structure
- ▶ Ballistic or super spherical buttons
- ▶ XT48 grade carbide
- ▶ Deep flushing grooves with optimal positioning
- ▶ Optimised wing / head design

WORLD CLASS STEEL PRODUCTION

Sandvik's rolling mill for hollow drill steel is the most up-to-date in the world. Fully automated, this unique mill is designed specifically for manufacturing this product. After rolling, the rods are turned to avoid decarburisation in the final rolling process. A long, straight centre hole is drilled in the drill steel blank and a core is inserted. The blanks are hot-rolled into a round or hexagon-shape. A carefully controlled cooling process after rolling guarantees uniform mechanical properties. The core is then removed and the drill steel is ready for shipping.



SANDVIK ALPHA, FEATURES AN ENTIRELY NEW THREAD DESIGN

The benefits of short threads on hexagonal drill rods are superior resistance to bending stresses, improved bit guidance and outstanding energy transfer. The sturdy thread is well supported inside the bit skirt, resulting in high precision collaring – even in complex rock formations and against uneven surfaces.



MF-DESIGN GIVES STRAIGHTER HOLES

Male-Female (MF) drill rods provide a more rigid drill string then one using extension rods and couplings. This is due to a 50% reduction in thread play of the MF rod connections vs. coupling connections. Drilling with a stiffer drill string results in improved hole straightness, improved efficiency and safety.



STRAIGHT, FAST AND SETTING THE INDUSTRY STANDARD

Compared to the T51 drill rods, GT60 rods have a 40% larger rod cross-section and a 65% higher bending resistance. These improvements double the life of the drill rods and shank adapter. As an added bonus, the rigidity of the GT60 drill rods permit optimum drilling patterns and higher rates of penetration.

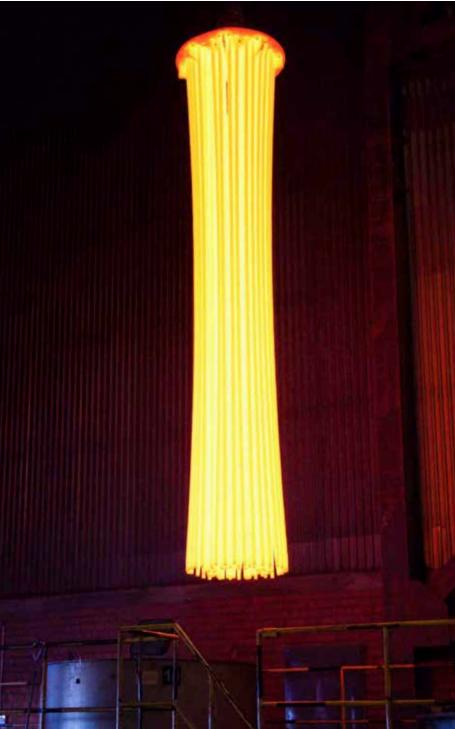
PROCESSES IN ROD MANUFACTURING

CARBURISATION

- ▶ Case hardening in a furnace with carbon rich gas
- ▶ Increased carbon content in outer layer hardens material

INDUCTION SURFACE HARDENING (HF) + THREADS

- ▶ Hard wear resistant surface
- ▶ Improved fatigue strength
- ▶ Induction hardening of thread
- ▶ Rapidly heated and cooled



TWO OF OUR LATEST DEVELOPMENTS BRING GREATER PRODUCTIVITY



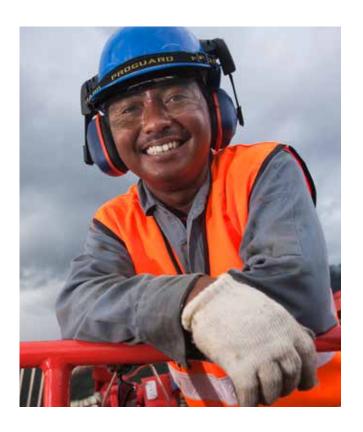
SANDVIK DEMONSTRATES ITS POWER

The quality of the holes drilled by a Sandvik DPI100 top-hammer rig, with an HL1560T rock drill, was found to be significantly better than those drilled by a competitor's high-pressure, high-volume down-the-hole drill. Utilising an 87 mm diameter, 4.3 m GT60 pilot tube, GT60 4.3 m extension rods, I15 mm ballistic Retrac bits, and HL1560T shank adapters. Holes were drilled in granite to a depth of 20 m and at an angle of 15°. Fuel consumption of the Sandvik DPI100 was significantly lower then the DTH Drill, 42 liters/hr vs. 78 liters/hr.

The Sandvik GT60 bits has been created in our unique engineering, manufacturing and facility. This has enabled us to tailor the characteristics of the bits to match almost any drilling conditions.

SIX REASONS WHY THE GT60 WORKS FOR YOUR BUSINESS

- The steel in Sandvik *GT60* rods is produced in one of the world's most advanced continuous casting plants. Almost 90 years of experience of rolling hollow bar steel, has made Sandvik unique in being able to produce steel with close tolerances and excellent material properties.
- **2.** The Sandvik *GT60* system includes Sandvik button bits to comply with all kinds of rock formations and drilling site conditions.
- **3.** The Sandvik *GT60* system provides double the penetration rate, consuming half the energy compared with DTH drilling.
- 4. The Ø 60 mm rod cross-section is optimised for high-energy transfer of impact power in top hammer drilling of Ø 92 to 152 mm holes. Compared with 51 mm rods, the 40% larger cross-section and 65% higher bending stiffness permit faster penetration rates and straighter holes.
- 5. Sandvik *GT60* is perfectly suitable for automatic rod handling systems. Male and female (MF) threads minimise energy losses and simplify handling.
- The large flushing holes provides superior removal of cuttings and improves drilling performance. The exact centring of the hole during manufacture ensures uniform steel walls and uniform product performance.



THE SANDVIK BITS DOUBLES SERVICE LIFE AROUND THE WORLD

Great versatility, higher penetration rates, straighter holes, longer bit life and lower energy consumption. That's what you can expect from the Sandvik bits. An exceptionally versatile series of threaded button-bits from 28–152 mm in diameter. The buttons are made from proprietary grades of cemented carbide. Sandvik provides all the best button shapes (spherical, concial or ballistic) and the required skirt designs (regular or retrac) in order to obtain the best bit for the rock formation in question.

"If button failure is a problem in your rock formation, then certainly you will see a big increase in bit life with Sandvik rock tools."

EXCEEDING EXPECTATIONS

Sandvik Alpha bits exceeded the mine average by 25% in Canada. This figure includes bit damage during uncoupling, but after corrections in procedures the bit performed over 50% above the mines average in very hard abrasive rock. The new bits could also be regrinded 5–7 times compared to 3–4 with the old standard.

Drifter bit service life was proven to be at least 20% higher than competition in a Swedish mine.

SERVICE LIFE DOUBLES

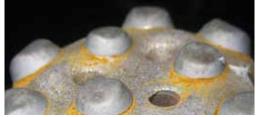
Management at an Australian mine, welcomed the news of higher productivity and lower costs. Long notorious for button breakages, Sandvik Alpha drill bits are giving almost double the service life compared to drill bits used previously. In a large-scale test, stoppages are down; productivity is up while bit costs have been cut by half.



MAINTAIN PERFORMANCE WITH PROPER CARE AND ATTENTION



Cemented carbide is one of the most successful composite engineering materials produced. Its unique combination of strength, hardness and toughness satisfies the most demanding applications – but working with such high stresses, inserts and buttons are more subject to wear.



The height of the cemented carbide diminishes as wear progresses resulting in wear flats.



Wear to the cemented carbide on the periphery of the bit is abnormally high, causing an "anti-taper" to develop, which diminishes the clearance of the bit.



Here the surface became fatigued with microscopic cracks developing.

BUTTON BITS SHOULD BE REGROUND WHEN PENETRATION RATES DROP OR IF THE CEMENTED CARBIDE SHOWS SIGNS OF DAMAGE

Fixed grinding routines bring with them good working practice. Bits for instance, should be examined then reground after a specific number of holes, or at the end of the shift. Premature grinding is not necessarily uneconomical since less carbide needs to be ground off. It is better to regrind then experience low productivity due to damage.

Proper grinding adds considerably to drill bit service life. Another equally important fact of proper grinding is it also enhances the performance of the entire drilling operation, especially hole straightness.

Grinding should always be done in accordance with safety regulations, read more about our Health and Safety Information at page 99.

THREADS ARE SUBJECTED TO HIGH STRESS AND REQUIRE SPECIAL CARE

LUBRICATION

Thread grease reduces wear and helps in the uncoupling of rods.

Replace the lid on the grease container after use. The grease must be protected from drilling dust, left unprotected it will interact with the dust. Left to act as a grinding compound rather then lubricator next time it is used.

THREAD WEAR

Drilling with worn threads carries a great risk of equipment downtime.

When replacing the drill rods, it is often more economical to replace the coupling as well. Mixing new and old threads can make the newer threads wear more quickly.

BENT AND BLOCKED DRILL STEELS

Not all bent drill steels have to be discarded. They can often be straightened, either in the hole or with a straightening press.

Drill steels and rods flushing holes can become blocked. The blockage can usually be removed with the aid of a copper tube and water flushing.

TRANSPORTATION AND STORAGE

During transportation, bits and cemented components must be packed so as to prevent damage to the cemented carbide. Even though cemented carbide is very resistant to impact against other materials, it is easily damaged by collision with other cemented carbide components.

INCREASED PRODUCTION VS GOOD DRILLING PRACTICE

Good drilling practices and correct machines settings are important for the service life of your drilling tools. Good management and maintenance also play a crucial role in the end cost and schedule.





BIT DIAMETER NOTES

All bit diameters are larger than the given dimensions in the catalog

Cross bits: Can be a maximum of +Imm due to manufacturing tolerance

Button bits: Some bit designs can be a maximum +3mm to compensate for

fast diameter wear.

The minimum diameter for all button bits is +1.5mm above the

given dimensions

Keep in mind that a bit always gives a bigger hole than the stated bit diameter.

BIT CLASSIFICATION CODES

H: M: S:	Medium hard rock	
C: F:	Homogeneous (competent) rock Fissured rock	
V: A: N:	Abrasive rock	



INCREASE SERVICE LIFE AND EXTEND PRODUCTIVITY

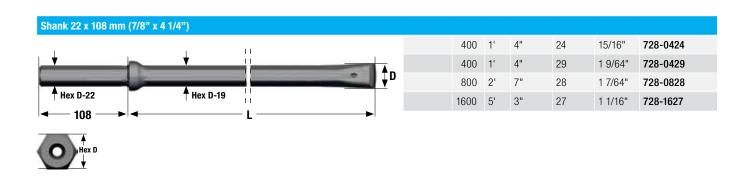
Integral drill steels, tapered rods, drill bits and threaded rods are key to highproductivity in all applications. Sandvik drill steel has high fatigue strength and toughness, offers high wear resistance giving an efficient and economic drilling operation. Our unique R23 rods and bits for extension drilling provide the strongest thread in hole sizes 33–45 mm. For Underground applications we have fully carburized rods with superior wear resistance and service life. In fact working with Sandvik means you can expect consistent high quality and maximum operational dependability when it comes to all small hole drilling applications.

HI9 (3/4) INTEGRAL DRILL STEELS	18
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HI9 (3/4") Integral drill steels

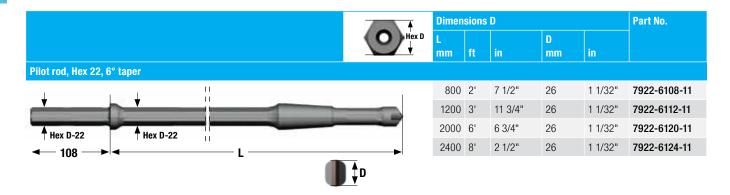
	Dimensions D						Part No.
	Series	L mm	ft	in	D mm	in	
Shank 19 x 108 mm (3/4" x 4 1/4")							
1 11	21	400	1'	4"	29	19/64"	724-0429
—	-	800	2'	7"	28	1 7/64"	724-0828
A Have Date	-	1600	5'	3"	27	1 1/16"	724-1627
Hex n-1a Hex n-1a	-	2400	7'	10"	26	1 1/32"	724-2426
4 108 → I							
A to	24	600	2'	-	27	1 1/16"	724-0627
Hex D	-	1200	3'	11"	26	1 1/32"	724-1226
	Boulder-	400	1'	4"	24	15/16"	724-0424
	steel	800	2'	7"	23	29/32"	724-0823

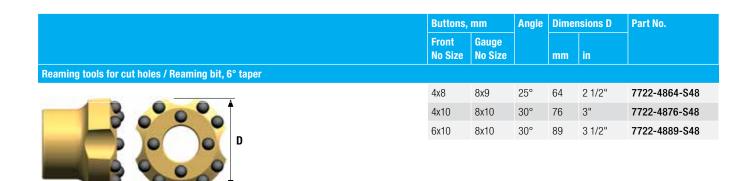


H22 (7/8") Integral drill steels

	Dimensi	ons D					Part No.
	Series	L mm	ft	in	D mm	in	
7/8" x 4 1/4")							
<u>.</u>	11	800	2'	7"	34	1 11/32"	714-0834-65
†	1	1600	5'	3"	33	1 19/64"	714-1633-65
Hov D-22	•	2400	7'	10"	32	1 1/4"	714-2432-65
L		3200	10'	6"	31	1 7/32"	714-3231
		4000	13'	1"	30	1 3/16"	714-4030
		4800	15'	9"	29	1 9/64"	714-4829
		5600	18'	4"	28	1 7/64"	714-5628-50
		6400	21'	-	27	1 1/16"	714-6427-50
		7200	23'	8"	26	1 1/32"	714-7226-50
	12	800	2'	7"	40	1 37/64"	714-0840-65
		1600	5'	3"	39	1 17/32"	714-1639-65
		2400	7'	10"	38	1 1/2"	714-2438-65
		3200	10'	6"	37	1 29/64"	714-3237-65
		4000	13'	1"	36	1 27/64"	714-4036-65
		4800	15'	9"	35	1 3/8"	714-4835-65
		5600	18'	4"	34	1 11/32"	714-5634-65
		6400	21'	_	33	1 19/64"	714-6433-65
		7200	23'	8"	32	1 1/4"	714-7232-65
	13	400	1'	4"	34	1 11/32"	714-0434-65
	10	800	2'	7"	33	1 19/64"	714-0833-65
		1200	3'	11"	32	1 1/4"	714-1232-65
		1600	5'	3"	31	1 7/32"	714-1631
		2000	6'	7"	30	1 3/16"	714-2030
	16	600	2'	_	35	1 3/8"	714-0635-65
	10		3'	11"	34		714-0035-05
		1800	5'	11"	33		714-1234-05
		2400		10"	32	1 1/4"	714-2432-65
	17	600	2'	_	41	1 5/8"	714-0641-65
	17	1200	3'	11"	40	1 37/64"	714-0641-65
		1800	5'	11"	39	1 17/32"	714-1240-65
		2400		10"	38	1 1//32	714-1639-65
		_100	,	.0	30	. 1/2	2
		2000	6'	7"	33	1 19/64"	714-2033-65
		8000	26'	3"	26	1 1/32"	714-8026-50
		9600	28' 31'	11" 6"	25 25	1"	714-8825-500 714-9625-500
		800	2'	7"	29	1 9/64"	714-0829
		1600	5'	3"	28	1 7/64"	714-1628-50
		2400	7'	10"	27	1 1/16"	714-2427-50

H22 Reaming tools





H22 Tapered tools, I2° taper

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	
Button bit	NU SIZE	NU SIZE	NO SIZE	NU SIZE		mm	""	
	1x5	1x5	1x7	4x7	35°	28	1 1/8"	7795-6428-B48
	1x5	1x5	1x7	4x7	35°	30	1 3/16"	7795-6430-B48
Button bit		1			1			
1	2x4	1x4	2x7	5x7	40°	32	1 1/4"	7795-5232-B48
D	2x4	1x4	2x7	5x8	40°	35	1 3/8"	7795-5235-B48
	2x4	1x4	2x7	5x9	40°	38	1 1/2"	7795-5238-B48
+								
Button bit								
200	2x4	1x4	2x7	5x7	40°	33	1 9/64"	7770-5233-B48
	2x4	1x4	2x7	5x8	35°	35	1 3/8"	7770-5235-B48
D C C C C C C C C C C C C C C C C C C C								
Button bit								
A	1x4	1x6	2x7	5x7	35°	33	1 9/64"	7770-4433-B48
D	1x5	1x5	2x7	5x7	35°	35	1 3/8"	7770-4435-B48
Button bit								
	2x4	1x4	6x7	2x7	40°	33	1 9/64"	7770-5433-B48
D								
Cross bit								
	1x4	2x4	_	-	-	30	1 3/16"	7770-9030-42
D	1x6	2x4.5	-	-	-	32	1 1/4"	7770-9032-42
	1x6	2x4.5	-	-	-	35	1 3/8"	7770-9035-42

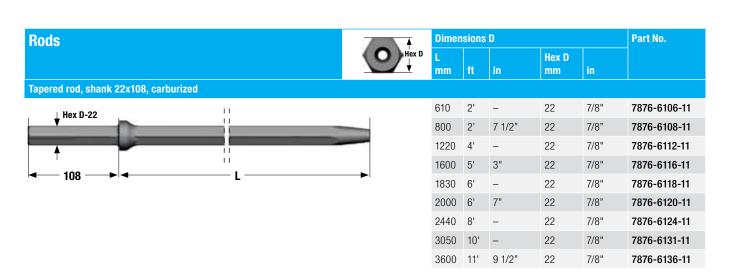
H22 Tapered tools, I2° taper

Rods	A .	Dimen	sions	Part No.			
	Hex D	L			Hex D		
		mm	ft	in	mm	in	
Tapered rod, shank 22x108, carburized							
↓ Hex D-22		610	2'	-	22	7/8"	7870-6106-11
WHOM DEE	in the same of the	1220	4'	-	22	7/8"	7870-6112-11
1		1830	6'	-	22	7/8"	7870-6118-11
108 L		2000	6'	7"	22	7/8"	7870-6120-11
100 E		2440	8'	-	22	7/8"	7870-6124-11
		3050	10'	-	22	7/8"	7870-6131-11
		3200	10'	6"	22	7/8"	7870-6132-11
		3660	12'	-	22	7/8"	7870-6137-11
Tapered rod, shank 22x108, HF-hardened - For surface drilling							
₩ Hex D-22		2440	8'	-	22	7/8"	7870-5124-11
WHEAD-22		3200	10'	6"	22	7/8"	7870-5132-11
		4000	13'	1 1/2"	22	7/8"	7870-1140-11
100		4400	14'	5"	22	7/8"	7870-1144-11
108 - L		4800	15'	9"	22	7/8"	7870-1148-11
		5600	18'	4 1/2"	22	7/8"	7870-1156-11
		6400	21'	-	22	7/8"	7870-1164-11
		7200	23'	7 1/2"	22	7/8"	7870-1172-11
		8000	26'	3"	22	7/8"	7870-1180-11
		8800	28'	10 1/2"	22	7/8"	7870-1188-11

H22 Tapered tools, II° taper

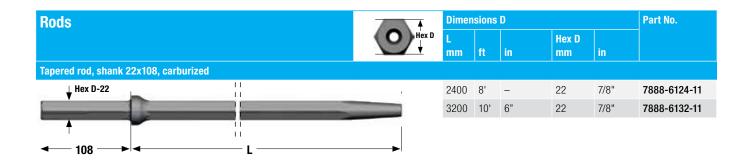
Bits	Flushing hole, mm E		Buttons, mm		Angle	Dimensions D		Part No.
			Front No Size	Gauge No Size		mm	in	
Button bit								
4	1x6	1x6	2x8	3x9	40°	38	1 1/2"	7776-1938-B48
	1x6	1x6	2x8	3x9	40°	40	1 37/64"	7776-1940-B48

Button bit								
	1x5	1x5	2x7	5x7	40°	32	1 1/4"	7776-4432-B48
	1x5	1x5	2x7	5x8	40°	35	1 3/8"	7776-4435-B48
D	1x5	1x5	2x7	5x8	35°	36	1 7/16"	7776-4436-B48
	1x5	1x5	2x7	5x8	35°	38	1 1/2"	7776-4438-B48
	1x6	1x6	2x8	5x9	35°	40	1 37/64"	7776-4440-B48

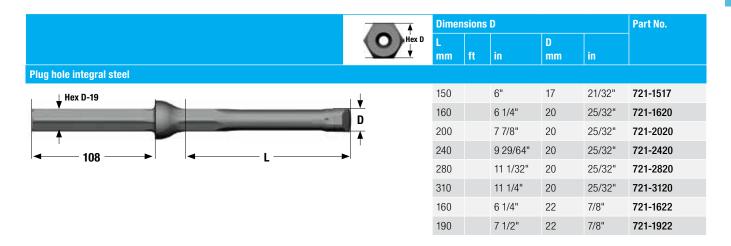


H22 Tapered tools, 7° taper

Bits	Flushing hole, mm B		Buttons, mm		Angle	le Dimensions D		Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	
Button bit								
	2x5	1x5	2x7	5x7	40°	32	1 1/4"	7788-5232-B48
	2x4	1x4	2x7	5x7	40°	33	1 9/64"	7788-5233-B48
D	2x4	1x4	2x7	5x8	40°	35	1 3/8"	7788-5235-B48
	2x4	1x4	2x7	5x8	35°	38	1 1/2"	7788-5238-B48



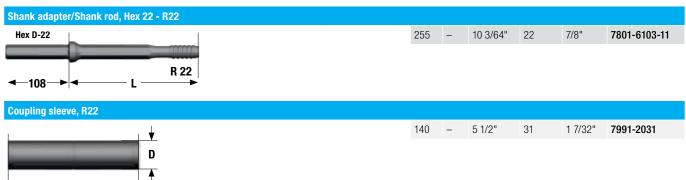
Stone working tools



R22 (7/8") Extension drilling tools

Cross bit	Flushing hole, mm Buttons, mm		Angle	Dimensions D		Part No.		
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	
Cross bit								
	1	4.5	2	4.5	-	38	1 1/2"	7731-1038-42





7737-5345-R48

SMALL HOLE DRILLING

R23 (29/32") Extension drilling tools

Bits		Flushing hole, mm		mm	Angle	Dimer	nsions D	Bit	Part No.
		_	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit									
	1x4	1x6	2x7	5x7	35°	33	1 5/16"	HMCA	7737-4433-R48
	1x6	1x6	2x7	5x8	40°	35	1 3/8"	HMCA	7737-5235-R48
D	1x6	1x6	2x7	5x8	35°	38	1 1/2"	HMCA	7737-5238A-R48
•	1x6	1x6	2x8	5x9	35°	41	1 5/8"	HMCA	7737-5241-R48
Button bit									



Rods	△	Dimen	sions	D			Part No.
	Hex D	L mm	ft	in	Hex D mm	in	
MF-rod, R23 - Hex 22 - R23							
Hex D-22		2095	6'	10 1/2"	22	7/8"	7857-4821-20
		3050	10'	-	22	7/8"	7857-4831-20

Female end Ø 31 mm



255	-	10 3/64"	22	7/8"	7807-6103-11
800	2'	7"	22	7/8"	7807-6108-11
1600	5'	3"	22	7/8"	7807-6116-11
2400	8'	-	22	7/8"	7807-6124-11
3200	10'	-	22	7/8"	7807-6132-11
3600	11'	9 5/8"	22	7/8"	7807-6136-11



255	-	10 3/64"	25	1"	7807-7103-30
3600	11'	9 "	25	1"	7807-7136-30

R25 (I") Extension drilling tools

ts	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
tton bit									
	1x4	1x6	2x7	5x8	35°	35	1 3/8"	HMCA	7732-4435-S48
	1x5	1x6	2x7	5x8	40°	35	1 3/8"	HMCA	7732-5235-R48
	1x6	1x6	2x7	5x9	30°	38	1 1/2"	HMCA	7732-5238-S48
	1x6	1x6	2x7	5x9	35°	38	1 1/2"	HMCA	7732-5238-R48
	1x6	1x6	2x8	5x9	35°	41	1 5/8"	HMCA	7732-5241-S48
	1x6	1x6	2x8	5x9	35°	41	2 5/8"	HMCA	7732-5241-R48
tton bit									
	3x4.5	-	3x8	6x9	40°	45	1 3/4"	MSCFAN	7732-5345F-R
ods				Dime	nsions [)			Part No.
ous -			OHe	k D L			Hex D	1	
ank adapter / rod, Hex 22 x R25				mm	ft	in	mm	in	
Hex D-22				255	_	10 3/6	1" 22	7/8"	7802-6103-1
₩ IIIGA B-22	0000	-		800	2'	7"	22	7/8"	7802-6108-1
1		R 25		1000	3'	3"	22	7/8"	7802-6110-1
T		0							
108 L		—							
108 Lension rod, R25 - Hex 25 - R25				915	3'	_	25	1"	7852-2309-2
108 — L	P-17 E3.50 T-0	28							
108 L ension rod, R25 - Hex 25 - R25	0000			1220	4'	- -	25	1" 1"	7852-2309-2 7852-2312-2 7852-2315-2
108 - L ension rod, R25 - Hex 25 - R25 Hex D-25	0000			1220 1525	4' 5'	-		1"	7852-2312-2 7852-2315-2
108 L ension rod, R25 - Hex 25 - R25	R 25			1220	4' 5' 6'	- -	25 25	1" 1"	7852-2312-2

160 – 6 1/4"

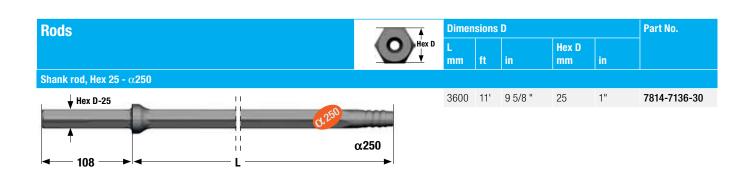
1 3/8"

7992-2035

Sandvik Alpha. α 250 bit thread

Bits		Flushing	Flushing hole, mm		Buttons, mm		Dimensions D			Part No.	
			Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit											
			1x6	1x6	2x7	5x9	35°	38	1 1/2"	HMCA	7764-5238-R48
d.250	-3	D									





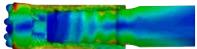


PRECISION ENGINEERING FOR STRAIGHTER DRILL HOLES

- Short thread design with sturdy guides, well inside the bit skirt offers higher precision in collaring – even in complex rock formations and uneven surfaces.
- Rigid drill string results in straighter holes, permitting optimum drilling patterns and higher rate of advance.
- Exact collaring and straighter holes are prerequisites for productive drilling with less over break and lower overall costs.
- Hexagonal rods in the tool system result in a rigid, integrated power pack drill string results in superior resistance to bending stresses and gives improved bit guidance as well as perfect energy transfer.
- More efficient energy transmission with minimal wear on all components in the drilling system.
- Short thread and robust guide improves service life on drifter rods with at least +30% compared to R32 rods.

NEW DESIGN PROVIDES TROUBLE FREE OPERATION





Advanced analysis have been used to simulate and locate critical bending stresses of various designs to arrive at an optimally dimensioned rod/bit connection.





SANDVIK ALPHA ROD/BIT CONNECTIONS TAKE DRILLING PRODUCTIVITY TO A NEW LEVEL

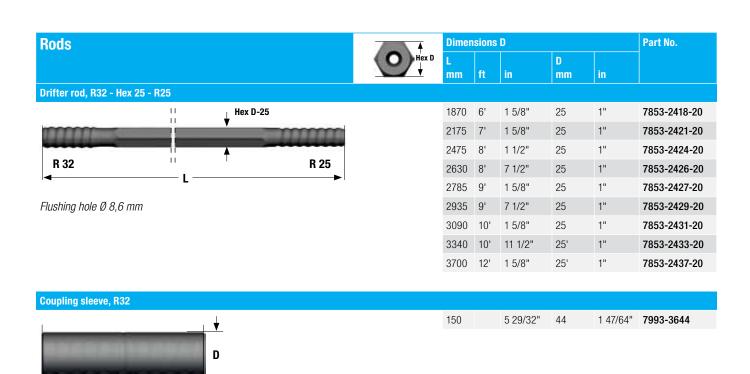
Sandvik engineers are constantly engaged in upgrading our tool systems. Supported by our in-house manufacturing facilities, the results of their work speaks for themselves, providing new profitable solutions for all rock drilling professionals.

R25 (I") BIT THREAD	32
R28 (I I/8") BIT THREAD	34
R32 (I I/4") BIT THREAD	35
SANDVIK ALPHA. @330 BIT THREAD	38
R35 (I 3/8") BIT THREAD	41
SANDVIK EXTRA. R35 (I 3/8") BIT THREAD	43
SANDVIK BITS	44

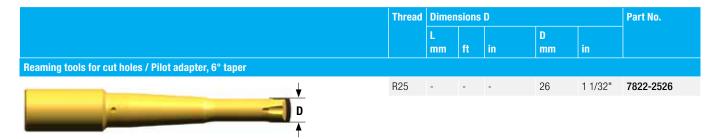


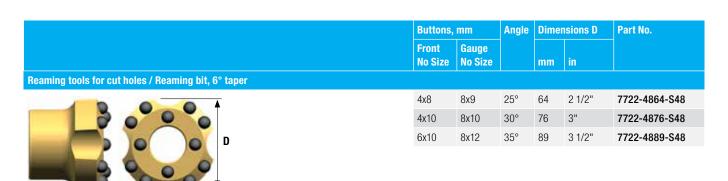
R25 (I") bit thread

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dimer	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, type 52									
	1x4,5	1x6	2x7	5x7	45°	33	1 5/16"	HMCA	7732-4433C-S48
	1x5	1x6	2x7	5x9	30°	35	1 3/8"	HMCA	7732-4435-S48
	1x5	1x6	2x7	5x9	30°	37	7/16"	HMCA	7732-4437C-S48
	1x6	1x6	2x7	5x9	30°	38	1 1/2"	HMCA	7732-5238-S48
	1x6	1x6	2x7	5x9	35°	38	1 1/2"	MCAN	7732-5238-R48
	1x6	1x6	2x8	5x9	35°	41	1 5/8"	HMCA	7732-5241-\$48
Cross bit									
	1x5	2x5				35	1 3/8"	-	7732-1435-42



R25 (I") reaming tools





R28 (I I/8") bit thread

Bits		Flushing hole, mm		Buttons, mm		Dimensions D		Bit	Part No.
		Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, type 52									
	1x5	1x6	2x7	5x9	30°	37	7/16"	HMCA	7739-5237-S48
	1x6	1x6	2x7	5x9	35°	38	1 1/2"	MCAN	7739-5238-R48
D D	1x6	1x6	2x7	5x9	30°	38	1 1/2"	HMCA	7739-5238-S48
	1x6	1x6	2x8	5x9	35°	41	1 5/8"	HMCA	7739-5241-S48
	1x6	1x6	2x8	5x10	30°	43	1 11/16"	HMCA	7739-5243-S48

Cross bit							
	1x5	2x5	-	-	38	1 1/2"	7739-1438-42

Reaming tools	Thread	Dimen	sions	Part No.			
		L			D		
		mm	ft	in	mm	in	
Reaming tools for cut holes / Pilot adapter, 6° taper							
	R28	-	-	-	26	1 1/32"	7822-1526
D							

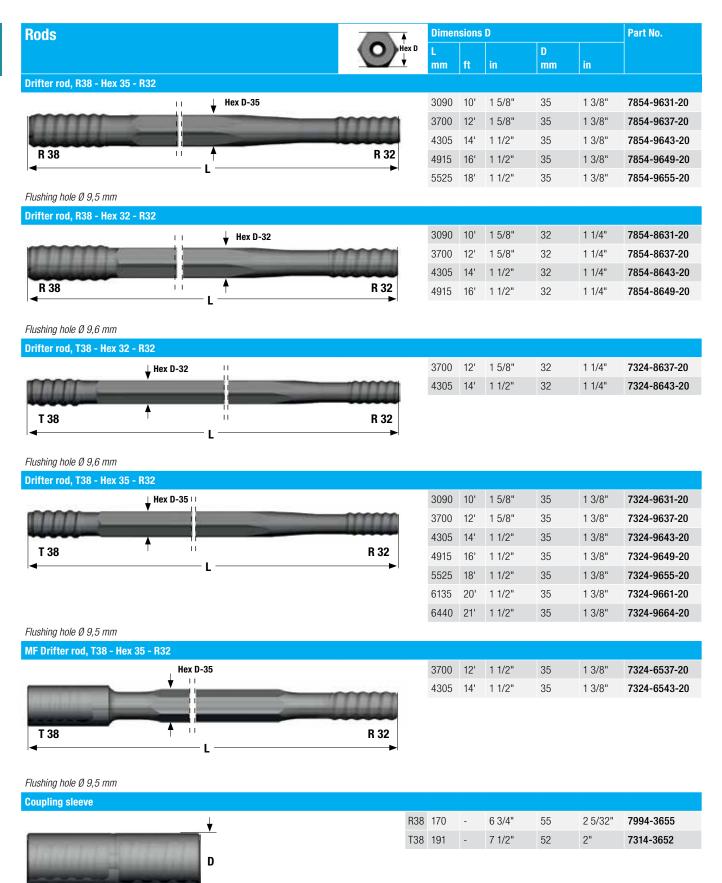
	Buttons	, mm	Angle	Dimer	nsions D	Part No.
	Front No Size	Gauge No Size		mm	in	
Reaming tools for cut holes / Reaming bit, 6° taper						
	4x8	8x9	25°	64	2 1/2"	7722-4864-\$48
	4x10	8x10	30°	76	3"	7722-4876-\$48
D	6x10	8x12	35°	89	3 1/2"	7722-4889-S48

Rods			A .	Dimensions D					Part No.
				L mm	ft	in	D mm	in	
Drifter rod, R32 - Hex 28 -	R28								
		8		2475	8'	1 1/2"	28	1 1/8"	7853-7624-20
				2785	9'	1 5/8"	28	1 1/8"	7853-7627-20
	 	P.00		3090	10'	1 5/8"	28	1 1/8"	7853-7631-20
R 32		R 28		3700	12'	1 5/8"	28	1 1/8"	7853-7637-20
•	-	-		4305	14'	1 1/2"	28	1 1/8"	7853-7643-20
Flushing hole Ø 8,8 mm									
Coupling sleeve, R32									
I	. ↓			150		5 29/32"	44	1 47/64"	7993-3644
-	D								

R32 (I I/4") bit thread

Bits	Flushing hole, mm		Buttons, mm		Angle	Dimensions D		Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, type 52									
	1x5	2x6	2x9	5x10	35°	43	1 11/16"	HMCVA	7733-5243A-S48
	1x5	2x6	2x9	5x11	30°	45	1 3/4"	HMCVA	7733-5245A-S48
	1x6	2x7.5	2x9	5x11	35°	48	1 7/8"	HMCVA	7733-5248A-S48
•	1x6	2x7.5	2x10	5x12	35°	51	2"	HMCVA	7733-5251A-S48
Button bit, type 54									
	2x6	2x6	2x9	6x9	40°	43	1 11/16"	MSCAN	7733-5443B-R48
	2x6	2x6	2x9	6x10	35°	45	1 3/4"	MSCAN	7733-5445B-R48
Button bit, type 53/16									
10_4	3x4.5	1x4.5	3x8	6x9	30°	43	1 11/16"	MSCAN	7733-5343A-R48
D	3x4.5	1x5	3x8	6x10	25°	45	1 3/4"	HMCAN	7733-5345A-S48
3 600	3x4.5	1x5	3x8	6x10	30°	45	1 3/4"	MSCAN	7733-5345A-R48
	3x5	1x5	3x9	6x10	30°	48	1 7/8"	HMCAN	7733-5348A-S48
	3x5	1x5	3x9	6x10	30°	48	1 7/8"	HMCAN	7733-5348A-R48
3 290	3x6	1x6	3x9	6x10	35°	51	2"	MSCAN	7733-1651A-S48
D	3x6	1x6	3x9	6x10	40°	51	2"	MSCAN	7733-1651A-R48
	3x6	1x6	3x10	6x11	35°	57	2 1/4"	HMCA	7733-1657A-S48
	3x7	-	3x11	6x12	30°	64	2 1/2"	HMCVA	7733-1664-S48
Button bit, type 55	Ove e	OVE E	2v0	240	400	45	1 0/4"	COEN	7722 55454 000
	3x5.5	3x5,5	3x9	3x9	40°	45	1 3/4"	SCFN	7733-5545A-C60
D	3x6	1x6	3x9	6x10	40°	51	2"	SCFN	7733-5551A-C60
Button bit, type 18	4x7	_	5x11	8x12	35°	76	3"	HMCVA	7733-1876-S48
			OATT	ONIE		7.5	Ü	THEOVE	.750 1570 040
Cross bit	45	40				45	1.0/4		7700 40454 46
	1x5	4x6	-	-	-	45	1 3/4"		7733-1345A-42

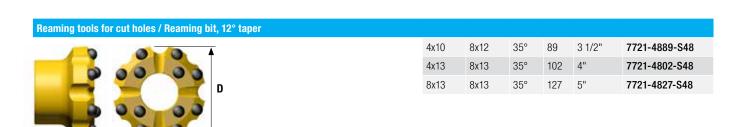
R32 (I I/4") bit thread



R32 (I I/4") reaming tools

Pilot adapters 6°, 12° taper	Thread	Dimen	sions	D			Part No.
		L mm	ft	in	D mm	in	
Reaming tools for cut holes / Pilot adapter, 6° taper				""		""	
→	R32	-	-	-	26	1 1/32"	7822-3526
D A							
Reaming tools for cut holes / Pilot adapter, 12° taper							
	R32	-	-	-	40	1 37/64"	7821-3440
D							

eaming bit 6°, 12° taper	Buttons,	Buttons, mm			nsions D	Part No.
	Front No Size	Gauge No Size		mm	in	
aming tools for cut holes / Reaming bit, 6° taper						
	4x8	8x9	25°	64	2 1/2"	7722-4864-S4
	4x10	8x10	30°	76	3"	7722-4876-S4
D	6x10	8x12	35°	89	3 1/2"	7722-4889-S4

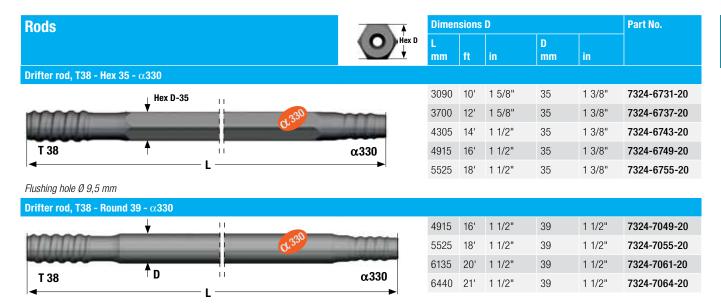


Reaming bit	Flushing hole, mm		Buttons, mm		Angle	Dimensions D		Part No.
	Front No Size	Gauge No Size	Pilot No Size	Gauge No Size		mm	in	
Reaming tools for cut holes / Reaming bit, R32								
	4x6	-	3x10	12x13	35°	102	4"	7733-5602P-S48

Sandvik Alpha. α 330 bit thread

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, type 52									
5	1x5	1x7.5	2x9	6x10	35°	43	1 11/16"	HMCVA	7767-5243A-S48
330	1x5	1x7.5	2x9	5x11	30°	45	1 3/4"	HMCVA	7767-5245A-S48
	1x6	2x7.5	2x9	5x11	35°	48	1 7/8"	HMCVA	7767-5248A-S48
Button bit, type 54									
R	2x6	2x6	2x9	6x9	40°	43	1 11/16"	MSCAN	7767-5443B-R48
	D 2x6	2x6	2x9	6x10	35°	45	1 3/4"	MSCAN	7767-5445B-R48
Button bit, type 53/16	3x4.5	1x4.5	3x8	6x9	30°	43	1 11/16"	MSCAN	7767-5343A-R48
1330	3x4.5	1x5	3x8	6x10	30°	45	1 3/4"	MSCAN	7767-5345A-R48
	D 3x4.5	1x5	3x8	6x10	25°	45	1 3/4"	HMCAN	7767-5345A-S4
	3x5	1x5	3x9	6x10	30°	48	1 7/8"	MSCAN	7767-5348A-R4
	3x5	1x5	3x9	6x10	30°	48	1 7/8"	HMCAN	7767-5348A-S4
	D 3x6	1x6	3x9	6x10	40°	51	2"	MSCAN	7767-1651A-R48
000	3x6	1x6	3x9	6x10	35°	51	2"	HMCAN	7767-1651A-S48
	3 x7	-	3x11	6x12	30°	64	2 1/2"	HMCAN	7767-1664-S48
Button bit, type 18	▲ 4x7	-	5x10	8x11	35°	76	3"	HMCAN	7767-1876-S48
	D ¥								
Button bit, Retrac	0.0		0.0	0.40	0.50	F.4	O.II.	LIMOAN	7707 40544 044
	3x6	-	3x9	6x10	35°	51	2"	HMCAN	7767-4651A-S48
Cross bit									
1380	1x5	4x6				45	1 3/4"		7767-1345A-42

Sandvik Alpha. α 330 bit thread



Flushing hole Ø 10,3 mm

Sandvik Alpha. lpha330 bit thread

Coupling Sleeves	Dimen	sions	D			Part No.
	L mm	ft	in	D mm	in	
Coupling sleeve, T38						
	191	-	7 1/2"	52	2"	7314-3652
DESCRIPTION OF THE PROPERTY OF						

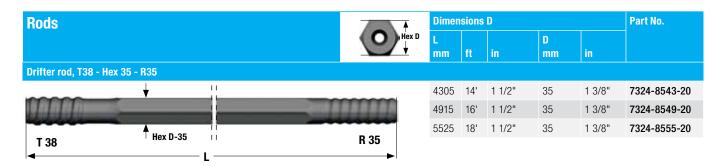
Reaming bit		Flushing	Flushing hole, mm Buttons,		mm	Angle	Dimensions D		Part No.
		Front No Size	Gauge No Size	Pilot No Size	Gauge No Size		mm	in	
Reaming tools for cut holes / Ream	ing bit, $lpha$ 330								
1,330	D	2x6	2x6	3x10	12x13	35°	102	4"	7767-5602P-S48
	0000								

Pilot adapter 12° taper	Thread	Dimen	Part No.				
		L mm	ft	in	D mm	in	
Reaming tools for cut holes / Pilot adapter, 12° taper							
	α330	-	-	-	40	1 37/64"	7821-6740
D							

Reaming bit 12° taper	Buttons,	Buttons, mm			nsions D	Part No.
	Front No Size	Gauge No Size		mm	in	
Reaming tools for cut holes / Reaming bit, 12° taper						
	4x10	8x12	35°	89	3 1/2"	7721-4889-S48
	4x13	8x13	35°	102	4"	7721-4802-S48
	8x13	8x13	35°	127	5"	7721-4827-S48

R35 (I 3/8") bit thread

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, type 53/16									
10.4	3x5	1x5	3x9	6x10	30°	48	1 7/8"	HMCAN	7738-5348A-S48
	3x5	1x5	3x9	6x10	30°	48	1 7/8"	MSCAN	7738-5348A-R48
		1x6	3x9	6x10	35°	51	2"	HMCAN	7738-1651A-S48
	3x6	1x6	3x9	6x10	40°	51	2"	MSCAN	7738-1651A-R48
Cross bit									
	1x5	2x7.5	-	-	-	48	1 7/8"	-	7738-1448-42



Flushing hole Ø 9,5 mm



4305	14'	1 1/2"	39	1 1/2"	7324-7243-20
4915	16'	1 1/2"	39	1 1/2"	7324-7249-20
5525	18'	1 1/2"	39	1 1/2"	7324-7255-20
6135	20'	1 1/2"	39	1 1/2"	7324-7261-20

191 – 7 1/2"

Flushing hole Ø 14,5 mm



7314-3652

R35 (I 3/8") bit thread

icuming bit		Flushing	Flushing hole, mm B		Buttons, mm		Dimensions D		Part No.
		Front No Size	_	Pilot No Size	Gauge No Size		mm	in	
Reaming tools for cut holes / Ream	ing bit, R35								
		2x6	2x6	3x10	12x13	35°	102	4"	7738-5602P-S48
100	D								

Pilot adapter 12° taper		Dimen	Part No.				
		L mm	ft	in	D mm	in	
Reaming tools for cut holes / Pilot adapter, 12° taper							
	R35	-	-	-	40	1 37/64"	7821-5440
D							

Reaming bit 12° taper	Buttons, mm			Dimensions D		Part No.	
	Front No Size	Gauge No Size		mm	in		
Reaming tools for cut holes / Reaming bit, 12° taper							
	4x10	8x12	35°	89	3 1/2"	7721-4889-S48	
00000	4x13	8x13	35°	102	4"	7721-4802-\$48	
D D	8x13	8x13	35°	127	5"	7721-4827-\$48	
0000							

Sandvik Extra. R35 (I 3/8") bit thread

Bits		Flushing hole, mm Bu		mm	Angle	Dimensions D			Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, Retrac R35									
10 A	3x6	1x5	3x9	3x10	30°	54	2 1/5"	MSCFAN	7738-4654A1-R48
D									

Rods	Dimer	sions	Part No.			
	L			D		
	mm	ft	in	mm	in	
Drifter rod, T35 - Round 39 - R35						
· · · · · · · · · · · · · · · · · · ·	4305	14'	1 1/2"	39	1 1/2"	7327-5243-20
	4915	16'	1 1/2"	39	1 1/2"	7327-5249-20
المرابعة والمستحدث والمستحدث والمستحدث والمستحدد	5525	18'	1 1/2"	39	1 1/2"	7327-5255-20
T 35 D R 35	6135	20'	1 1/2"	39	1 1/2"	7327-5261-20

39

39

39

1 1/2"

1 1/2"

1 1/2"

1 1/2"

7327-4731-20

7327-4737-20

7327-4743-20

7327-4749-20

Flushing hole Ø 14,5 mm, Female end Ø 48,2 mm



Flushing hole Ø 14,5 mm, Female end Ø 48,2 mm

Sandvik drifter bits

Sandvik bits for drifting and tunneling are available in four basic designs





Type 52

Designed for maximum bit life in hard and abrasive rock





Type 53

All-round design with a good trade off between speed and bit life length for hard to medium hard rock





Type 54

All-round design with high penetration rate for hard to medium hard rock





Type 55

Designed for maximum penetration rate in softer and less abrasive rock formations



THE RIGHT SOLUTIONS FOR INCREASED PRODUCTIVITY

Sandvik GT60 enables drilling of holes from 92 mm to 152 mm in diameter. By using a GT60 tool system when drilling the typical T51 hole size (102 mm), hole straightness can be greatly improved – thanks to the much stiffer and stable rod package.

Sandvik GT60 tools system also offers excellent energy transfer efficiancy all the way from rock drill to hole bottom, reducing fuel costs and environmental impact.

Increased energy transfer efficiancy is key to get the best penetration rate possible from every drilling rig.

A drill string with Sandvik MF-rods offers stiffer connections than a string with separate coupling sleeves due to the $50\,\%$ reduction in thread play.

BENEFITS WITH SANDVIK TOOLS IN BENCH DRILLING

- Using Sandvik rock tools gives a lower total operating cost.
- Longer service life of drill steel components (reduced drilling tool cost).
- Less downtime improved productivity.
- Improved safety better blasting control.
- Less hole deviation which gives more well balanced fragmentation (higher productivity in crushers).
- Reduced consumption of explosives (less specific charging), which accounts for 40-50% of the total drilling and blasting costs.

BOOSTS DRILLING PERFORMANCE TO MAKE OPERATIONS SIMPLER AND PRODUCTIVE

At Sandvik we have several types of specially designed drilling tools. Tools that offer solutions to minimise hole deviation and optimise drilling patterns. The results, improved hole straightness, superior energy transmission and higher drilling efficiency. Our in-house manufacturing facilities for steel production, machining and tailoring together with our research and development, gives us a competitive edge with product solutions tailored for rock drilling professionals.

R32 (I I/4")	48
T35(I 3/8")	50
T38 (I I/2")	51
T45 (I 3/4")	53
T51 (2")	55
SANDVIK GT60	57





R32 (I I/4")

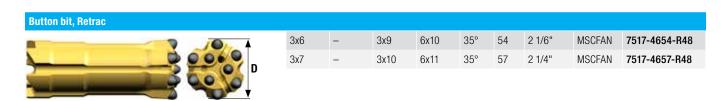
Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
	3x6	1x6	3x9	6x10	35°	51	2"	HMCA	7733-1651A-S48
0000	3x6	1x6	3x9	6x10	40°	51	2"	MSCAN	7733-1651A-R48
D	3x6	1x6	3x10	6x11	35°	57	2 1/4"	HMCA	7733-1657A-S48
	3x7	-	3x11	6x12	30°	64	2 1/2"	HMCVA	7733-1664-S48
D	4x7	-	5x11	8x12	35°	76	3"	HMCVA	7733-1876-S48
	3x6	1x6	3x9	6x10	40°	51	2"	SCFN	7733-5551A-C60
D	3x6	1x6	3x10	6x10	40°	57	2 1/4"	SCFN	7733-5557A-C60
	3x8	1x8	3x10	6x11	40°	64	2 1/2"	SCFN	7733-5564A-C60
Button bit, Retrac									
	3x6	-	3x9	6x10	35°	51	2"	HMCFA	7733-4651-S48
D	3x6	-	3x9	6x10	35°	51	2"	MSCFAN	7733-4651-R48
D	4x7	-	5x9	8x10	30°	64	3 1/2"	HMCFVA	7733-4864-S48
Cross bit									
	1x5	2x7.5	-	-	-	51	2"	HMCFA	7733-1451-42

R32 (I I/4")

Rods	Dimensions D Par							
	Bit dia.				D			
Cuida tuka	mm	mm	ft	in	mm	in		
Guide tube	E1 C4	1020	C.I		46	1.2/4"	7052 4610 20	
	51-64	1830	6'	_	46	1 3/4"	7953-4618-20	
R 32 P R 32								
← L								
MF-rod, R32 - round 32 - R32								
		3050	10'	-	32	1 1/4"	7853-5131-20	
		3660	12'	-	32	1 1/4"	7853-5137-20	
R 32 D R 32	_							
R 32	•							
Flushing hole Ø 9.2 mm. Wrench flat 25.4 mm. Female end Ø 45 mm								
Extension rod, R32 - round 32 - R32								
<u> </u>	22	2440	8'	-	32	1 1/4"	7853-3324-30	
		3050	10'	-	32	1 1/4"	7853-3331-30	
R 32 D R 32		3660	12'	-	32	1 1/4"	7853-3337-30	
L	-							
Flushing hole Ø 11.7 mm. Wrench flat 25.4 mm								
Coupling sleeve R32								
<u> </u>		150	-	5 29/32"	44	1 47/64"	7993-3644	
D D								

T35(I 3/8")

Bits	Flushing	Flushing hole, mm		Buttons, mm		Dimensions D			Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
	3x6	1x6	3x9	6x10	35°	54	2 1/2"	HMCFVAN	7517-1654A-S48



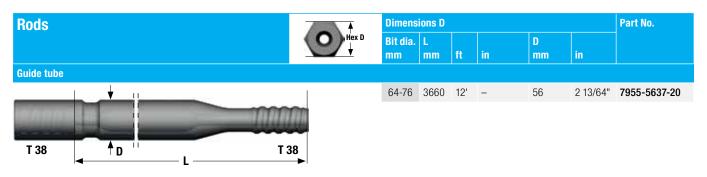
Rods		Dimen	sions	Part No.				
			L mm	ft	in	D mm	in	
MF-rod, T35 - round 39 - T35								
+	II II		3050	10'	-	39	1 1/2"	7327-4731-20
		MAI	3660	12'	-	39	1 1/2"	7327-4737-20
T 35	 	T 35						

Female end Ø 48,2 mm. Flushing hole Ø 14,5 mm

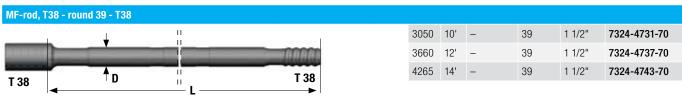
T38 (I I/2")

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.	
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation		
Button bit, regular skirt										
	3x8	-	3x11	6x12	30°	64	2 1/2"	HMCVAN	7514-1664-S48	
D D	3x8	-	3x11	6x12	35°	64	2 1/2"	MSCAN	7514-1664-R48	
A	4x8	_	5x10	8x11	30°	70	2 3/4"	HMCVAN	7514-1870-S48	
1 00000	4X8	-	5x11	8x12	35°	76	3"	HMCVAN	7514-1876-S48	
D	4X8	_	5x11	8x11	40°	76	3"	MSCAN	7514-1876-R48	
	4X9	-	5x12	8x12	35°	89	3 1/2"	HMCVAN	7514-1889-S48	
10000	2x11	1x6	4x10	8x10	30°	64	2 1/2"	HMCAN	7514-2664A-S48	
D	2x11	1x6	6x10	8x11	35°	76	3"	HMCAN	7514-2676A-S48	
	ZXII	170	ONTO	OXII	00	10	Ü	1111107111	7011 2070/1010	
D 000	3x8	1x8	3x10	6x11	40°	64	2 1/2"	SCFN	7514-5564A-C60	
D	4x8	1x8	4x10	8x11	40°	76	3"	SCFN	7514-5576A-C60	
Button bit, Retrac										
	3x8	-	3x11	6x12	30°	64	2 1/2"	HMCFVAN	7514-4664-S48	
	4x8	_	5x9	8x10	35°	64	2 1/2"	MSCFAN	7514-4864-R48	
00000	4x8	_	5x10	8x11	30°	70	2 3/4"		7514-4870-S48	
D	4X8	_	5x11	8x12	35°	76	3"		7514-4876-S48	
	4X8	-	5x11	8x11	35°	76	3"	MSCFAN	7514-4876-R48	
180000	2x10	1x6	4x10	8x10	30°	64	2 1/2"	HMCFAN	7514-7864A-S48	
D	2x11	1x6	6x10	8x11	35°	76	3"	HMCFAN	7514-7876A-S48	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \										
X bit	1,47.5	07.5				0.4	0.1/0"		7514 4004 44	
	1x7.5	2x7.5	_	_	_	64	2 1/2"	_	7514-4064-11	

T38 (I I/2")



Female end OD 56 mm



Flushing hole Ø 14.5 mm. Female end OD 56 mm



Flushing hole Ø 14.5 mm. Wrench flat 32 mm



Flushing hole Ø 9.6 mm



T45 (I 3/4")

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dimer	sions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
○ ○ ○ △	4x8	-	5x10	8x11	30°	70	2 3/4"	HMCVAN	7515-1870-S48
1 00000	4x8	-	5x11	8x12	35°	76	3"	HMCVAN	7515-1876-S48
D	4x8	-	5x11	8x12	35°	76	3"	MSCAN	7515-1876-R48
	4x9	-	5x13	8x13	35°	89	3 1/2"	HMCVAN	7515-1889-S48
· ·	4x9	_	5x13	8x13	40°	89	3 1/2"	HMCAN	7515-1889-R48
L Q Q Q D	3x10	_	9x11	9x13	35°	102	4"	HMCVAN	7515-1902-S48
	3x10	_	9x11	9x13	40°	102	4"	MSCAN	7515-1902-R48
D	2x12	1x7.5	6x10	8x11	35°	76	3"	HMCAN	7515-2676A-S48
20000	3x10	1x7.5	6x10	9x11	35°	89	3 1/2"	HMCAN	7515-2689A-S48
	4x8	1x8	4x10	8x11	40°	76	3"	SCFN	7515-5576A-C60
D	470	170	4,10	OATT	40	10	J	OOTIV	7313 3376A 000
Button bit, Retrac									
004	4x8	-	5x10	8x11	35°	70	2 3/4"	MSCFAN	7515-4870-R48
	4x8	-	5x11	8x12	35°	76	3"		7515-4876-S48
D	4x8	-	5x11	8x12	35°	76	3"	MSCFAN	7515-4876-R48
	4x9	-	5x13	8x13	35°	89	3 1/2"		7515-4889-S48
	4x9	_	5x13	8x13	40°	89	3 1/2"	MSCFAN	7515-4889-R48
	3x10	-	9x11	9x13	35°	102	4"	HMCFVAN	7515-4902-S48
D	3x10	-	9x11	9x13	40°	102	4"	MSCFAN	7515-4902-R48
L0 00000	2x11	1x6	6x10	8x11	35°	76	3"	HMCFAN	7515-7876A-S48
D	3x10	1x8	6x10	9x11	35°	89	3 1/2"	HMCFAN	7515-7889A-S48
	5.1.0	0	30	3,			J ., _		

T45 (I 3/4")

Rods	Dimens	Part No.					
	Bit dia. mm	L mm	ft	in	D mm	in	
Guide tube				***	******		
	76-89	3660	12'	_	63	2 1/2"	7956-6337-70
W/CD // CD /	89-102	3660	12'	_	76	3"	7956-7637-70
T 45 ↑D T 45							

Female end Ø 63 mm / 76 mm



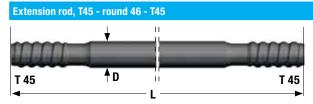
 3050
 10'
 46
 1 3/4"
 7325-7731-70

 3660
 12'
 46
 1 3/4"
 7325-7737-70

 4265
 14'
 46
 1 3/4"
 7325-7743-70

 6095
 20'
 46
 1 3/4"
 7325-7761-70

Flushing hole Ø 17 mm. Female end Ø 63 mm



3050	10'	-	46	1 3/4"	7325-7331C-30
3660	12'	-	46	1 3/4"	7325-7337C-30
4265	14'	-	46	1 3/4"	7325-7343C-30

63

2 31/64" **7315-3663**

Flushing hole Ø 17 mm



210 – 8 1/8"

T51 (2")

Bits Control of the C	Flushing	hole, mm	Buttons,	mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
0 0 4	4x10	-	5x13	8x13	35°	89	3 1/2"	HMCVAN	7516-1889-S4
00000	4x10	-	5x13	8x13	40°	89	3 1/2"	MSCAN	7516-1889-R
	3x13	_	9x11	9x13	40°	102	4"	MSCAN	7516-1902-R4
	3x13	_	9x11	9x13	35°	102	4"	HMCVAN	7516-1902-S
D	3x14	-	10x12	9x14	35°	115	4 1/2"	HMCVAN	7516-1915-S
	3x14	-	10x13	9x14	35°	127	5"	HMCVAN	7516-1927-S
	3x12 3x12	1x8 1x8	6x10 6x12	9x11 9x12	35° 35°	89 102	3 1/2"	HMCAN HMCAN	7516-2689A- 7516-2602A-
tton bit, Retrac									
	4x10	-	5x13	8x13	35°	89	3 1/2"	HMCFVAN	7516-4889-8
D	4x10	-	5x13	8x13	40°	89	3 1/2"	MSCFAN	7516-4889-I
	3x13	_	9x11	9x13	40°	102	4"	MSCFAN	7516-4902-P
30000	3x13	-	9x11	9x13	35°	102	4"	HMCFVAN	7516-4902-5
D	3x14	-	10x12	9x14	40°	115	4 1/2"	HMCFVAN	7516-4915-P
	3x14	-	10x12	9x14	35°	115	4 1/2"	HMCFVAN	7516-4915-S
	3x14	_	10x13	9x14	35°	127	5"	HMCEVAN	7516-4927-S

3x12

6x10

9x11

HMCFAN **7516-7889A-S48**

3 1/2"

T51 (2")

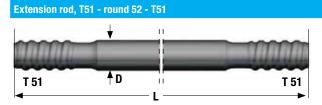
Rods	Dimens	Dimensions D						
		Bit dia.		44	i.e.	D	in	
Guide tube		mm	mm	ft	in	mm	in	
. ↓		89-102	3660	12'	-	76	3"	7957-7637-70
Comments in Comments		102-127	3660	12'	-	87	3 1/2"	7957-8737-70
T 51 ↑ D L -	T 51							

Female end Ø 76 / 87 mm



3660	12'	_	52	2"	7326-5537-70
4265	14'	-	52	2"	7326-5543-70
6095	20'	_	52	2"	7326-5561-70

Flushing hole Ø 21,5 mm. Female end Ø 71 mm



3050	10'	-	46	1 3/4"	7326-7331C-30
3660	12'	-	46	1 3/4"	7326-7337C-30
4265	14'	-	46	1 3/4"	7326-7343C-30

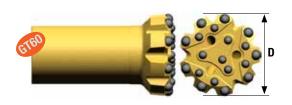
Flushing hole Ø 21.5 mm



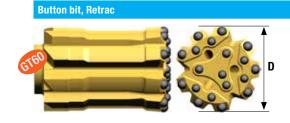
225	-	8 7/8"	71	2 51/64"	7316-3671
225	_	8 7/8"	76	3"	7316-3676

Sandvik GT60

Bits		Flushing hole, mm		Buttons, mm		Dimensions D		Bit	Part No.
	Front No Size		Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
1000	4x11	-	6x12	8x14	35°	92	3 5/8"	HMSCVA	7620-1892-S48
TEN D	4x11	-	6x12	8x14	35°	96	3 3/4"	HMSCVA	7620-1896-S48

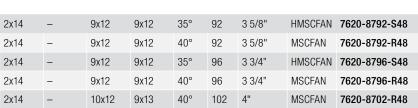


3x14	-	9x11	9x13	35°	102	4"	HMSCVA	7620-1902-S48
3x14	_	10x12	9x14	35°	115	4 1/2"	HMSCVA	7620-1915-S48
3x14	-	10x12	9x14	40°	115	4 1/2"	MSCFAN	7620-1915-R48
3x14	_	10x14	9x16	35°	127	5"	HMSCVA	7620-1927-S48
3x14	_	10x14	9x16	35°	140	5 1/2"	HMSCVA	7620-1940-S48
3x14	_	12x14	9x16	35°	152	6"	HMSCVA	7620-1952-S48



3x14	-	9x11	9x13	35°	102	4"	HMSCFVA	7620-4902-S48
3x14	-	10x12	9x14	40°	115	4 1/2"	MSCFAN	7620-4915-R48
3x14	_	10x12	9x14	35°	115	4 1/2"	HMSCFVA	7620-4915-S48
3x14	_	10x14	9x16	35°	127	5"	HMSCFVA	7620-4927-S48
3x14	-	10x14	9x16	35°	127	5"	HMSCFVA	7620-4927-S55
3x14	_	10x14	9x16	35°	140	5 1/2"	HMSCFVA	7620-4940-S48
3x14	-	12x14	9x16	35°	152	6"	HMSCFVA	7620-4952-S48

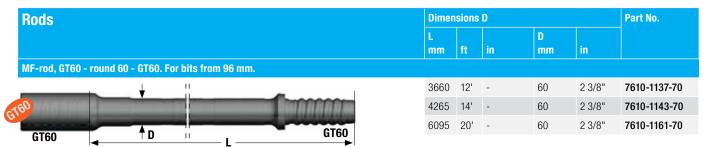




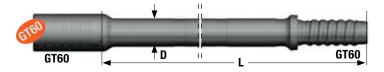


3x13	_	6x13	9x16	35°	115	4 1/2"	HMCFVA	7620-8115-S55

Sandvik GT60

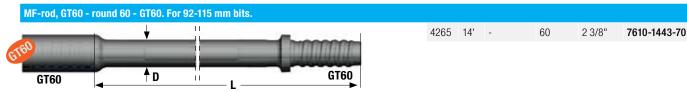


Female end Ø 85 mm. Flushing hole Ø 22,5 mm

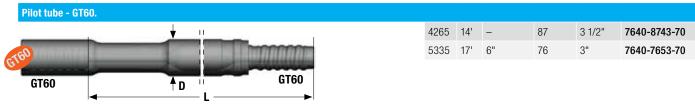


4265 14' - 64 2 1/2" **7610-1243-70**

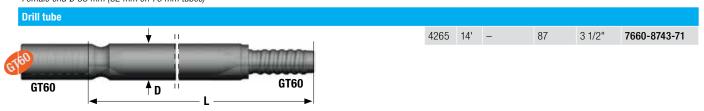
Female end Ø 85 mm. Flushing hole Ø 25 mm



Female end Ø 82 mm. Flushing hole Ø 22,5 mm



Female end Ø 85 mm (82 mm on 76 mm tubes)



Always use with tube shank adapter 7600-6030-01 (HL1500, 1560) or 7600-6031-01 (HL1000, 1010)

58



WHERE QUALITY COUNTS DILUTION IS PRIMARILY CAUSED BY DEVIATION

One question commonly asked is whether it's possible to increase the output a long hole-drilling. The answer is an emphatic yes. It's all to do with hole straightness and direction. Accurate placement of explosives energy will protect weak ground conditions. The ultimate reason for efficient, accurate drilling is mine profitability. Hole deviation adversely effects profitability in the form of poor fragmentation, low ore recovery and ore dilution. Using Sandvik quality tools has been proven to reduce deviation by up to 40%.

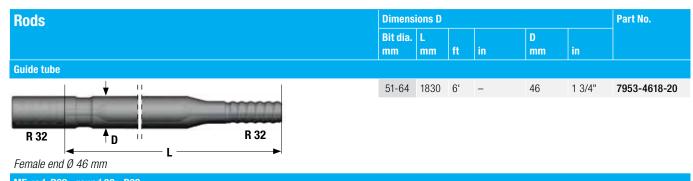
62
64
65
67
69
71
72



R32 (I I/4")

Bits	Flushing hole, mm Buttons, mm Angle Dimension		nsions D	Bit	Part No.				
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, Regular skirt									
	3x6	1x6	3x9	6x10	35°	51	2"	HMCA	7733-1651A-S48
0000	3x6	1x6	3x9	6x10	40°	51	2"	MSCAN	7733-1651A-R48
D	3x6	1x6	3x10	6x11	35°	57	2 1/4"	HMCA	7733-1657A-S48
	3x7	-	3x11	6x12	30°	64	2 1/2"	HMCVA	7733-1664-S48
D	4x7	-	5x11	8x12	35°	76	3"	HMCVA	7733-1876-S48
	3x6	1x6	3x9	6x10	40°	51	2"	SCFN	7733-5551A-C60
D	3x6	1x6	3x10	6x10	40°	57	2 1/4"	SCFN	7733-5557A-C60
	3x8	1x8	3x10	6x11	40°	64	2 1/2"	SCFN	7733-5564A-C60
Button bit, Retrac skirt									
	3x6	-	3x9	6x10	35°	51	2"	HMCFA	7733-4651-S48
D	3x6	-	3x9	6x10	35°	51	2"	MSCFAN	7733-4651-R48
	4x7	-	5x9	8x10	30°	64	3 1/2"	HMCFVA	7733-4864-S48
Cross bit									
	1x5	2x7.5	-	-	-	51	2"	HMCFA	7733-1451-42

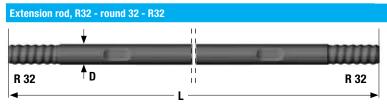
R32 (I I/4")



MF-rod, R32 - round 32 - R32 R 32 R 32

915	3'	_	32	1 1/4"	7853-5109-20
1220	4'	_	32	1 1/4"	7853-5112-20
1525	5'	-	32	1 1/4"	7853-5115-20
1830	6'	_	32	1 1/4"	7853-5118-20

Flushing hole Ø 11.7 mm. Wrench flat 25.4 mm. Female end Ø 45 mm



915	3'	_	32	1 1/4"	7853-3309-20
1220	4'	_	32	1 1/4"	7853-3312-20
1525	5'	-	32	1 1/4"	7853-3315-20
1830	6'	_	32	1 1/4"	7853-3318-20

1 47/64" **7993-3644**

7823-3647

5 29/32"

Flushing hole Ø 11.7 mm. Wrench flat 25.4 mm



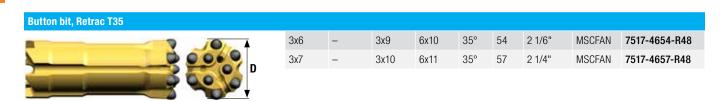
Pilot adapter Thread L Dimensions D Part No.									
L D D	Pilot adapter	Thread	Thread Dimensions D						
			L		in	D			
	Pilot adapter for reaming of 51 mm (2") pilot holes								



Reaming bit	Buttons,	mm	Angle	Dimensions D		Bit	Part No.
	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Reaming bit							
1-3 000	4x12	8x12	35°	102	4"	-	7723-4802-S48
	4x12	8x12	35°	127	5"	-	7723-4827-S48

T35 (I 3/8")

Bits	Flushing	hole, mm	, mm Buttons, mm		Angle	Dimensions D		Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, regular skirt									
	3x6	1x6	3x9	6x10	35°	64	2 1/2"	HMCFVAN	7517-1654A-S48



Rods				Dimer	sions	Part No.			
				L mm	ft	in	D mm	in	
MF-rod, T35 - Ro	und 39 - T35								
	+	11		1830	6'	-	39	1 1/2"	7327-4718-20
STATE OF THE REAL PROPERTY.			A A A A A A A A A A A A A A A A A A A						
	↑p	II II							
T 35	. 6	11	T 35						
 		L	—						

Female end Ø 48,2 mm. Flushing hole Ø 14,5 mm

T38 (I I/2")

Bits	Flushin	g hole, mm	Buttons	s, mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, Regular skirt									
	3x8	-	3x11	6x12	30°	64	2 1/2"	HMCVAN	7514-1664-S48
	3x8	-	3x11	6x12	35°	64	2 1/2"	MSCAN	7514-1664-R48
	4x8	_	5x10	8x11	30°	70	2 3/4"	HMCVAN	7514-1870-S48
1 0 00 00	4X8	-	5x11	8x12	35°	76	3"	HMCVAN	7514-1876-S48
D	4X8	-	5x11	8x11	40°	76	3"	MSCAN	7514-1876-R48
	4X9	-	5x12	8x12	35°	89	3 1/2"	HMCVAN	7514-1889-S48
D D	2x11	1x6	4x10	8x10	30°	64	2 1/2"	HMCAN	7514-2664A-S48
2000	2x11	1x6	6x10	8x11	35°	76	3"	HMCAN	7514-2676A-S48
0000	3x8	1x8	3x10	6x11	40°	64	2 1/2"	SCFN	7514-5564A-C60
	4x8	1x8	4x10	8x11	40°	76	3"	SCFN	7514-5576A-C60
Button bit, Retrac skirt									
Dutton bit, netrat skirt	3x8	1_	3x11	6x12	30°	64	2 1/2"	HMCEVAN	7514-4664-S48
D									
	4x8	-	5x9	8x10	35°	64	2 1/2"	MSCFAN	7514-4864-R48
	4x8	-	5x10	8x11	30°	70	2 3/4"	HMCFVAN	7514-4870-S48
D	4X8	-	5x11	8x12	35°	76	3"	HMCFVAN	7514-4876-S48
	4X8	-	5x11	8x11	35°	76	3"	MSCFAN	7514-4876-R48
D	2x10	1x6	4x10	8x10	30°	64	2 1/2"	HMCFAN	7514-7864A-S48
	2x11	1x6	6x10	8x11	35°	76	3"	HMCFAN	7514-7876A-S48
X bit	47 =	0,.7 5				6.4	0.4/0"		7514 4004 44
	1x7.5	2x7.5	-	_	_	64	2 1/2"	-	7514-4064-11

T38 (I I/2")

Rods	Dimens	Part No.					
	Bit dia.		ft	in	D	in	
Guide tube	mm	mm	IL	111	mm	in	
	64-76	1830	6'	-	56	2 13/64"	7955-5618-20
Whom I							
T 38							

1 1/2"

1 1/2"

1 1/2"

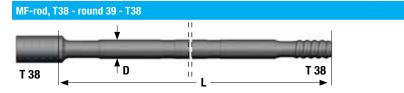
39

7324-4712C-20

7324-4715C-20

7324-4718C-20

Female end OD 56 mm



Flushing hole Ø 14.5 mm. Female end OD 56 mm

Pilot adapter	Thread	Dimen	sions	Part No.			
		L mm	ft	in	D mm	in	
Pilot adapter for reaming of 51 mm (2") pilot holes							
	R38	-	-	-	47	1 7/8"	7823-2647
ÎD ÎD							

1525 5'

1830 6'

Reamer	Buttons,	mm	n Angle		ngle Dimensions D		Part No.
	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Reaming bit							
- 000 A	4x12	8x12	35°	102	4"	_	7723-4802-S48
	4x12	8x12	35°	127	5"	-	7723-4827-\$48

T45 (I 3/4")

Bits	Flushing	g hole, mm	Buttons	, mm	Angle	Dime	nsions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, Regular skirt									
	4x8	-	5x10	8x11	30°	70	2 3/4"	HMCVAN	7515-1870-\$48
	4x8	-	5x11	8x12	35°	76	3"	HMCVAN	7515-1876-S48
D D	4x8	-	5x11	8x12	35°	76	3"	MSCAN	7515-1876-R48
	4x9	-	5x13	8x13	35°	89	3 1/2"	HMCVAN	7515-1889-S48
	4x9	-	5x13	8x13	40°	89	3 1/2"	HMCAN	7515-1889-R48
	3x10	_	9x11	9x13	35°	102	4"	HMCVAN	7515-1902-S48
D	3x10	_	9x11	9x13	40°	102	4"	MSCAN	7515-1902-R48
1 800.00	2x12	1x7.5	6x10	8x11	35°	76	3"	HMCAN	7515-2676A-S48
D	3x10	1x7.5	6x10	9x11	35°	89	3 1/2"	HMCAN	7515-2689A-S48
	4x8	1x8	4x10	8x11	40°	76	3"	SCFN	7515-5576A-C60
Button bit, Retrac skirt	4.0		5.40	0.44	050	70	0.0/4"	MOOFAN	7545 4070 D40
9 0 A	4x8	-	5x10	8x11	35°	70	2 3/4"	MSCFAN	7515-4870-R48
	4x8	_	5x11	8x12	35°	76	3"		7515-4876-S48
D	4x8	-	5x11	8x12	35°	76	3"	MSCFAN	7515-4876-R48
—	4x9	_	5x13	8x13	35°	89	3 1/2"	HMCFVAN	7515-4889-S48
	4x9	-	5x13	8x13	40°	89	3 1/2"	MSCFAN	7515-4889-R48
	3x10	_	9x11	9x13	35°	102	4"	HMCEVAN	7515-4902-S48
D	3x10	_	9x11	9x13	40°	102	4"	MSCFAN	7515-4902-348 7515-4902-R48
	5,10		JATT	3,10	40	102	7	WOOTAN	7313 4302 1140
	2x11	1x6	6x10	8x11	35°	76	3"	HMCFAN	7515-7876A-S48
D	3x10	1x8	6x10	9x11	35°	89	3 1/2"	HMCFAN	7515-7889A-S48
·									
Reaming bit		<u> </u>	3x14	9x14	35°	127	5"	_	7515-5627-S48
	00	1	7x14	9x14 8x14	35°	152	6"	_	7515-5652-S48
	000	D	7.814	0.14	00	132	U		7010 3002-340

T45 (I 3/4")

Rods	Dimens	ions D					Part No.
	Bit dia.				D		
Guide tube	mm	mm	ft	in	mm	in	
unue tube	76-89	1830	6'	_	63	2 31/64"	7956-6318-21
T 45 D T 45							
L ————————————————————————————————————							

1220 4' 1525 5'

1830 6'

1 3/4"

1 3/4"

1 3/4"

46

7325-7712C-20

7325-7715C-20

7325-7718C-20

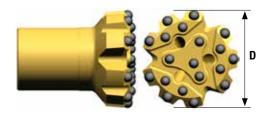
Female end Ø 63 mm



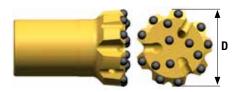
Flushing hole Ø 17 mm. Female end Ø 63 mm

T51 (2")

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dimer	isions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
Button bit, Regular skirt									
	4x10	_	5x13	8x13	35°	89	3 1/2"	HMCVAN	7516-1889-S48
100000	4x10	-	5x13	8x13	40°	89	3 1/2"	MSCAN	7516-1889-R48



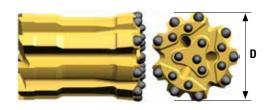
3x13	-	9x11	9x13	40°	102	4"	MSCAN	7516-1902-R48
3x13	_	9x11	9x13	35°	102	4"	HMCVAN	7516-1902-S48
3x14	_	10x12	9x14	35°	115	4 1/2"	HMCVAN	7516-1915-S48
3x14	-	10x13	9x14	35°	127	5"	HMCVAN	7516-1927-S48



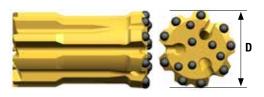
3x12	1x8	6x10	9x11	35°	89	3 1/2"	HMCAN	7516-2689A-S48
3x12	1x8	6x12	9x12	35°	102	4"	HMCAN	7516-2602A-S48



4x10	_	5x13	8x13	35°	89	3 1/2"	HMCFVAN	7516-4889-S48
4x10	_	5x13	8x13	40°	89	3 1/2"	MSCFAN	7516-4889-R48



3x13	-	9x11	9x13	40°	102	4"	MSCFAN	7516-4902-R48
3x13	-	9x11	9x13	35°	102	4"	HMCFVAN	7516-4902-S48
3x14	_	10x12	9x14	40°	115	4 1/2"	HMCFVAN	7516-4915-R48
3x14	-	10x12	9x14	35°	115	4 1/2"	HMCFVAN	7516-4915-S48
3x14	_	10x13	9x14	35°	127	5"	HMCFVAN	7516-4927-S48



3x12	1x8	6x10	9x11	35°	89	3 1/2"	HMCFAN	7516-7889A-S48
3x12	-	6x12	9x12	35°	102	4"	HMCFAN	7516-7802-S48

152 6"

35°

8x14

7x14

Reaming bit	
8	0000
	D. D.
	V O

Pilot diameter: 64 mm

7516-5652-S48

T51 (2")



Flushing hole Ø 21.5 mm. Female end Ø 71 mm

T45 (I 3/4") tube drilling tools

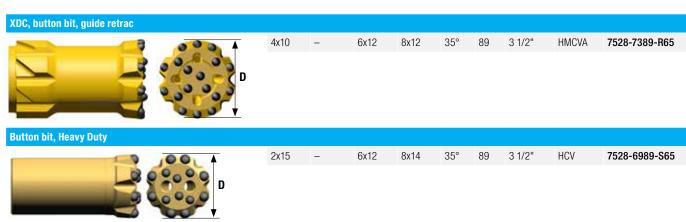
Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dimer	isions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
XDC, button bit									
0.0 A	4x7.5	-	6x10	8x11	35°	76	3"	HMCVA	7525-8476-R65

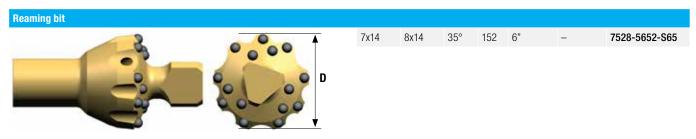
Tubes		Dimen	sions	D			Part No.
		L mm	ft	in	D mm	in	
Drill tube, T45 - Round 65 - T45							
	1	1525	5'	-	65	2 1/2"	7985-6315-26
mneant =		1830	6'	-	65	2 1/2"	7985-6318-26
	- HALLACAL DE						
T 45	T 45						

Flushing hole Ø 18 mm

ST58 (2 I/4") tube drilling tools

Bits	Flushing	hole, mm	Buttons,	mm	Angle	Dimer	isions D	Bit	Part No.
	Front No Size	Gauge No Size	Front No Size	Gauge No Size		mm	in	Classifi- cation	
XDC, button bit									
	4x10	_	6x12	8x12	35°	89	3 1/2"	HMCVA	7528-8489-R65





Pilot diameter 76 mm

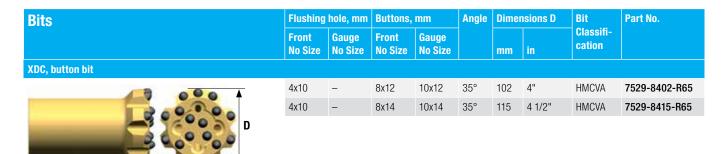
Tubes		Dimer	sions	D			Part No.
		L mm	ft	in	D mm	in	
Drill tube, ST58 - Round 76 - ST58							
. ↓ ↓ 11	1	1525	5'	-	76	3"	7378-7615-26
macant le le le		1830	6'	-	76	3"	7378-7618-26
ST58	ST58						

Flushing hole Ø 26 mm

LONG HOLE DRILLING UNDERGROUND

2x15

ST68 (2 3/4") tube drilling tools



5x14





XDC, button bit, guide retrac

4x10	-	8x12	10x12	35°	102	4"	HMCVA	7529-7302-R65
4x10	_	8x14	10x14	35°	115	4 1/2"	HMCVA	7529-7315-R65

35°

8x16

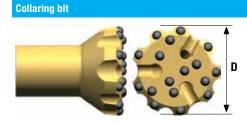
102

HCV

7529-6902-S65

7529-5652C-S65

7529-5604A-S65



3x18	-	8x16	9x16	35°	152	6"	_	7529-6652-S48

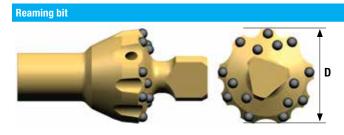
35°

9x16

16x14

152

204



Pilot diameter 95 mm 7529-5652C-S65 Pilot diameter 137 mm 7529-5604A-S65

Tubes			Dimensions D				
		L mm	ft	in	D mm	in	
Drill tube, ST68 - Round 87 - ST68							
. +	ı	1525	5'	-	87	3 1/2"	7379-8715-26
		1525	5'	-	87	3 1/2"	7379-8715-46
		1830	6'	-	87	3 1/2"	7379-8718-26
ST68	ST68	1830	6'	-	87	3 1/2"	7379-8718-46

3x16

4x14

Flushing hole Ø 30 mm



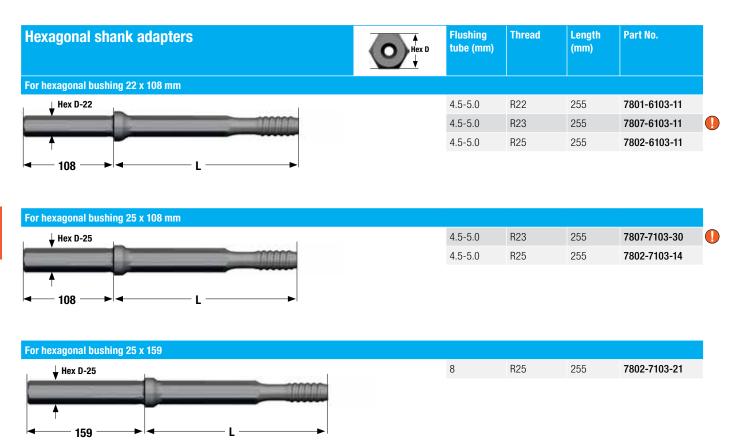
HIGH PRECISION ROCK DRILLING FOR RELIABLE PERFORMANCE AND LOWER COSTS

While every component in the drill string is crucial, the shank adapter must be engineered to transmit impact energy from the rock-drill piston, as well as rotation torque, into the drill string with no losses. It must withstand and transmit up to 6300 blows per minute from the piston continually and do it with great endurance and dependability. With this in mind, Sandvik manufactures premium quality shank adapters for most brands of rock drills.

HEXAGONAL SHANK ADAPTERS	76
SANDVIK	77
ATLAS COPCO	84
BOART	88
FURUKAWA	89
GARDNER-DENVER, INGERSOLL-RAND & KLEMM	90
MONTABERT	9 I
SIG	92



Hydraulic shanks generally have at least a 5 to 14-spline configuration. Pneumatic shanks tend to have internal or through-flushing. They can be identified by their lugs or 4-spline configuration.



	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
HLX 1					
→ → → → → → → → → → → → → → → → → → →	TU,B0	-	R23	235	7807-7570-01
39	TU,B0	-	R25	255	7802-7567-01
	TU,B0	_	R23	255	7807-7567-01
25					
	BE	_	R32	400	7803-7549-01
39 - 32 - 10 - 10			NoL		
HL 300S					
A-100 A	BO,TU	-	R28	245	7809-7547-01
59	BO,TU	-	R32	245	7803-7547-01
RD314					
→	UG	_	R32	205	7803-7663-01
35 4 45 8 8					
↓	UG	-	T38	410	7304-7672-01
42					
L400, L410, L500, L510, L550					
32 20,5	BO, PD, TU	10	R32	380	7803-3602-30
HLR 438L and HLR 438T	BE, TU	12.7	R32	380	7803-4700-50
	BE, TU	12.7	T38	400	7304-4700-50
38 37 38 L	DL, TU	12.1	130	400	7304-4700-30

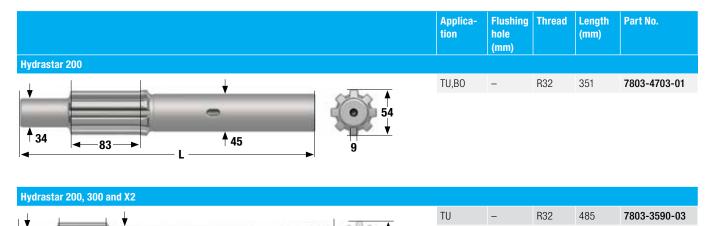
	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
HLR 438LS, 438TS, HL 538, HL538L, L550S					
	BE, PD, TU	-	R32	450	7803-4700-01
57	TU	-	R38	450	7804-4700-01
↑ 38 o ↑ 38	BE, PD, TU	-	T38	455	7304-4700-01
26 L → 37 ← 36 L	BE	-	T38	545	7304-4706-01
HLR 438LS, HL500-38/HL510-38, HL538L, L550S					
	BE	-	R32	550	7803-7535-02
59	BE	-	T35	550	7307-7535-02
49 49 10	BE	-	T38	550	7304-7535-02
L	BE	-	R38	550	7804-7535-02
HL 500-45 / HL510-45					
	BE	-	R32	550	7803-7557-01
59	BE	-	T35	550	7307-7557-01
49 45 10	BE	-	T38	550	7304-7557-01
L	BE	-	T45	550	7305-7557-01
HL 500 S-38 / 510 S-38 / 510 B / 510 LH					
	PD,TU	-	R32	460	7803-7531-01
59	TU	-	R38	460	7804-7531-01
49 49 10	PD,TU	-	T38	460	7304-7531-01
1	TU	-	R38	500	7804-7536-01
	PD,TU	-	T38	500	7304-7536-01
HL 500 F / HL510 F					
<u> </u>	В0	-	R32	350	7803-7553-01
49 45 10 10					
HL 550 SUPER / HL560 SUPER / HL510 S-45					
<u></u>	TU	-	T35	460	7307-7566-01
59	PD,TU	-	T35	550	7307-7557-01
↑ + + + + + + + + + + + + + + + + + + +	TU	-	R38	500	7804-7554-01
49 45 10	TU	-	T38	500	7304-7554-01
l← L →					

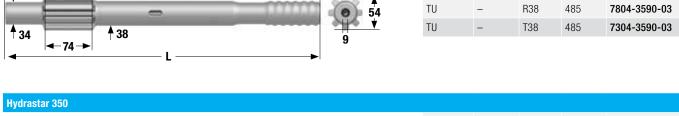
	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
HLX 5 / HLX 5T	TU		DOO	500	7000 7505 04
\$ \$ \$ \$ \$	TU	-	R32	500	7803-7585-01
59	TU	-	T35	500	7307-7585-01
49 45 8	TU	-	T38	500	7304-7585-01
49 12	TU	_	R38	500	7804-7585-01
	BE	-	R32	575	7803-7586-01
	BE	_	T35	575	7307-7586-01
	BE	-	T38	575	7304-7586-01
	BE	-	T45	575	7305-7586-01
HFX 5T					
→	TU	-	T38	720	7304-7668-01
59	TU	_	T35	720	7307-7668-01
49 45 8					
HLX5 PE-45	TU	_	R32	575	7803-7664-01
*	TU	_	T38	575	7304-7664-01
	. 0		100	0.0	
59	TII	_	T35	575	
117 4 45 10	TU	-	T35	575 720	7307-7664-01
↑ 45	TU	-	T38	720	7307-7664-01 7304-7671-01
117 4 45 10					7307-7664-01
117 45 10 10 RD520/RD525 - PE	TU TU	-	T38 T35	720 720	7307-7664-01 7304-7671-01 7307-7671-01
117 45 10 10 RD520/RD525 - PE	TU TU	-	T38 T35	720 720 745	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01
RD520/RD525 - PE 132,5 45 10 10	TU TU	-	T38 T35	720 720	7307-7664-01 7304-7671-01 7307-7671-01
RD520/RD525 - PE 132,5 45 10 10	TU TU	-	T38 T35	720 720 745	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01
RD520/RD525 - PE 132,5 A RD520/RD525	TU TU TU TU TU	-	T38 T35 T38 T35 T38 T35	720 720 745 745	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01 7307-7673-01
RD520/RD525 - PE 132,5 45 10 RD520/RD525 - PE 132,5 59 10 10 10 10 10 10 10 10 10 1	TU TU TU TU TU TU TU		T38 T35 T38 T35 T38 T38 T38	720 720 745 745 745 525 600	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01 7304-7669-01 7304-7666-01
RD520/RD525 - PE RD520/RD525 - PE RD520/RD525	TU TU TU TU TU TU TU TU	- - - -	T38 T35 T38 T35 T38 T38 T38 T38 T35	720 720 745 745 745 525 600 600	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01 7304-7669-01 7304-7666-01 7307-7666-01
RD520/RD525 - PE 132,5 45 10 RD520/RD525-PE 132,5 45 59 10 59	TU TU TU TU TU TU TU	- - - -	T38 T35 T38 T35 T38 T38 T38	720 720 745 745 745 525 600	7307-7664-01 7304-7671-01 7307-7671-01 7304-7673-01 7304-7669-01 7304-7666-01

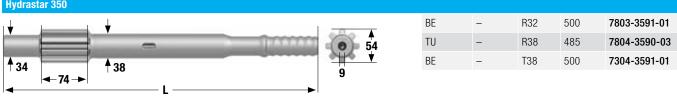
HL 600-45 / HL 600 S-45	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
	BE	_	R32	600	7803-7532-01
200	Ā	_	T38	600	7304-7532-01
The state of the s	60 BE ▼ Tubes, BE	_	T45	600	7305-7532-01
[↑] 40 → 75 → [↑] 45 10	TU,PD	_	T38	525	7304-7537-01
← L	TU,PD	_	T45	525	7305-7537-01
W 000 F0	10,12		110	020	7000 7007 01
HL 600-52	BE	-	T45	650	7305-7551-01
000000	BE BE	-	T51	650	7306-7551-02
↑40	<u>*</u>				
♦	BE	-	T38	600	7304-7541-02
- mann & 5	B E	-	T45	600	7305-7541-02
↑44 ←68 →					
	→ BE	-	T38	600	7304-7576-01
45 L 12,9	69 BE	-	T45	600	7305-7576-01
HL700/HL710-52/HL710PE-52/HL700LH/HL710S-52/HL710SPE-52/T45/HL650-52/HL80	00T-52/HL800T/PE	-52/HL810T-	52/HF810 1	Г-52	
<u> </u>	BE,PD	-	T38	600	7304-7577-02
	69 BE	-	T45	600	7305-7577-02
Aso	▼ BE	-	T51	600	7306-7577-03
4 95 → ↑ 52					
HL 850S	BE, PD	_	T45	670	7305-7400-01
	▲ DE DD	_	T51	670	7306-7400-02
14 47 480 b 152 14	69 BE, PD ★				322 2 100 32

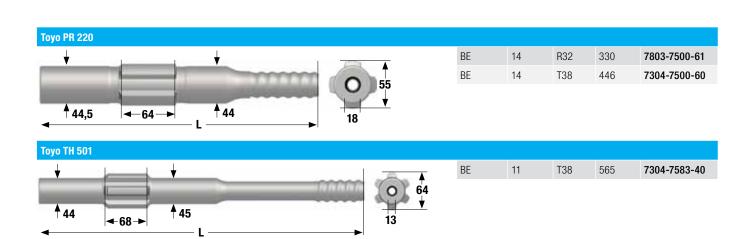
	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
HL1000/HL 1010, HL1000S/HL 1010S-52					
<u> </u>	BE	-	T45	670	7305-6010-01
79	BE	-	T51	670	7306-6010-02
↑	PD	-	T45	590	7305-6008-01
4-75 → ↑52 L	PD	-	T51	590	7306-6008-01
HL 1000-60/HL 1010-60					
·	BE	-	T51	670	7306-6014-02
79	BE	-	GT60	670	7600-6014-02
75 60	BE	-	ST58	670	7358-6014-01
L					
HL 1000-80/HL 1010-80, Shoulder drive	BE	_	GT60	760	7600-6031-01
→ 75 → ↑80 L					
HL1000/HL 1000S-80, HL1000-80/HL1010-80					
<u> </u>	PD	-	ST58	635	7328-6009-02
A 70	PD	-	ST68	640	7329-6009-02
475 ► ↑80 L					
HL1000PE-65, HL1010PE-65, HL1060T/PE-65, HL1500T/PE-65, HL1560T/PE-65					
<u>↓</u>	BE,	-	T51	760	7306-6025-02
79	BE,	-	GT60	760	7600-6025-02
	BE,	_	ST58	760	7358-6025-02
L ————————————————————————————————————					

HL 1500-52 / 1500 T-52	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
111 + 152 + 14	BE	-	T51	710	7306-6021-02
HL 1500-60 / 1500 T-60					
	BE	-	T51	760	7306-6022-02
79	BE	-	GT60	760	7600-6022-03
HL 1500-80/1560T-80/HL1060T-80/HF1560, Shoulder drive					
	BE	_	GT60	760	7600-6030-05
79	BE		ST68	630	7329-6034-05
←111 → 14	PD	-	ST58	635	7328-6020-01
L	PD	_	ST68	635	7329-6020-05
HL1500T/PE-90/HL1500ST/PE-90/ HL1560T/PE-90/HL1560ST/PE-90					
	PD	_	ST58	635	7328-6035-01
The second of th	PD	-	ST68	635	7329-6035-05
50079	BE	_	GT60	760	7600-6032-05
← 111 → Å 90					

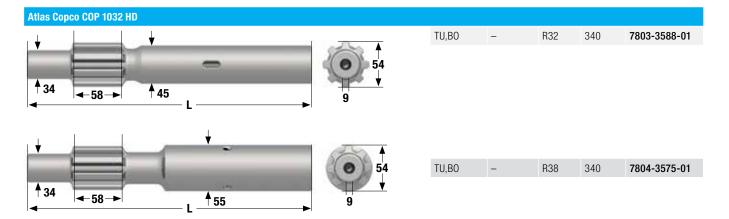






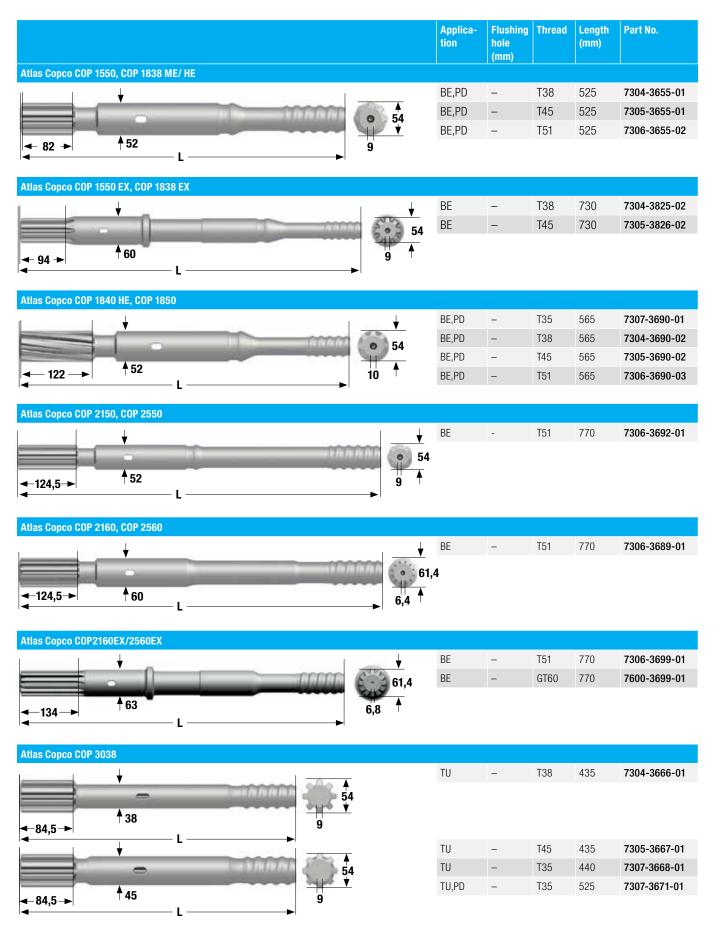


	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
Atlas Copco BBC 43, 44, 45 and 100					
↑32 → 19 ← ↑32 20	TU 18 ▼	10	R32	380	7803-3100-30
Atlas Copco BBC 51, 52, 54 and 120					
<u>+</u>	TU	10	R32	380	7803-4200-30
↑38 → 32 ← ↑38 25	† TU 57 ▼	10	T38	390	7304-4200-30
Atlas Copco BBE 57					
↑44,5	BE 64 ♥	14	T38	537	7304-7502-60
Atlas Copco COP 125, 130 and 131					
↑38 → 32 ← ↑38 → 32 ← ↑38	TU,BE,PD	14	T38	380	7304-4500-60

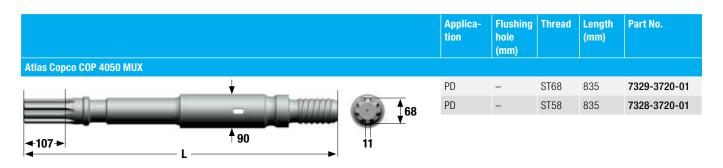


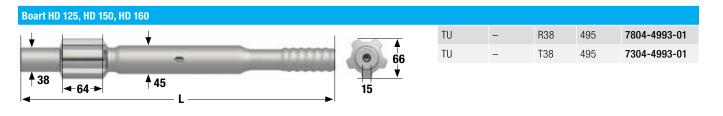
	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
Atlas Copco COP 1032 LE					
1 34 58 45 9 9 54 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	BE,DS	-	R32	550	7803-3576-01
Atlas Copco COP 1036/1038 HB					
↓	BE	-	R32	500	7803-3591-01
54	BE	_	T38	500	7304-3591-01
1 34					
54	BE	-	T45	500	7305-3591-01
↑ 34					
	TU	_	R32	485	7803-3590-03
	TU	_	R38	485	7804-3590-03
↑34 ↑38	TU	_	T38	485	7304-3590-03
↑34					
↓ ↓ ↓	BE,PD	_	R32	575	7803-3593-01
54	BE,PD	-	T38	575	7304-3593-01
↑34					
54	BE,PD	-	T45	575	7305-3593-01
1 34 45 L 9					
Atlas Copco COP 1132	DD		DOG	440	7000 0504 04
<u> </u>	PD	-	R32	410	7803-3581-01
→ 79 → ↑35	PD	-	R32	500	7803-3583-01

	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
Atlas Copco COP 1238					
↓ ↓ ↓ ↓	BE	-	R32	500	7803-3591-01
54	BE	-	T38	500	7304-3591-01
†34 †38 9	TU	-	R38	485	7804-3590-03
L	TU	-	T38	485	7304-3590-03
↓ ↓ ↓					
54	BE	-	T45	500	7305-3591-01
↑34					
↓ ↓ ↓ ↓	BE,PD	-	R32	575	7803-3593-01
54	BE,PD	-	T35	575	7307-3593-01
↑34	BE,PD	-	T38	575	7304-3593-01
	BE,PD	-	T38	575	7304-3550-01
	BE,PD	-	T45	575	7305-3593-01
↑34					
→	TU	-	R38	435	7804-3652-01
54 V	TU	-	T35	435	7307-3652-01
	TU	-	T38	435	7304-3652-01
	TU	-	R32	435	7803-3652-01
<u> </u>	В0	-	R32	525	7803-3656-01
54	BE	-	T35	525	7307-3656-01
4 82 → 1 38	В0	-	T38	525	7304-3656-01
Atlas Copco COP 1432 Female					
<u> </u>	TU	-	R38	341	7804-3670-02
	TU	-	R32	341	7803-3670-02
82 154					

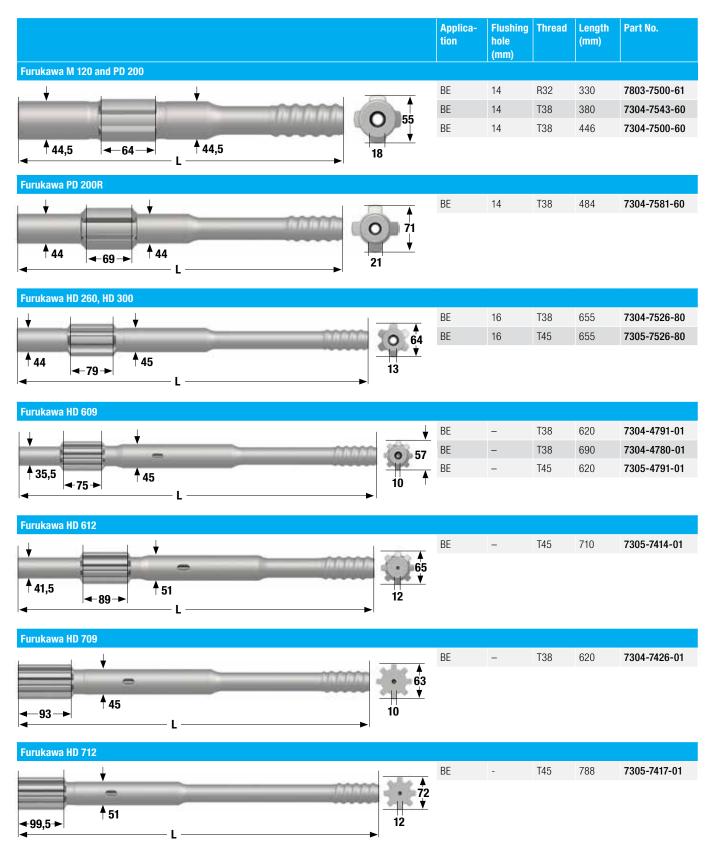


Atlas Copco/Boart





Furukawa



Gardner-Denver, Ingersoll-Rand and Klemm

	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
Gardner-Denver PR 123					
	TU,BE	14	R32	330	7803-7500-61
0 55	TU,BE	14	R32	380	7803-7543-60
	TU	14	R38	350	7804-7500-60
↑44,5 ←64→ ↑44,5 18	TU,BE	14	T38	446	7304-7500-60
L	TU,BE	14	T38	380	7304-7543-60
Ingersoll-Rand URD 475, URD 550, VL120, EVL 130, VL140 and F16					
1	BE	14	R32	330	7803-7500-61
	BE	14	R32	380	7803-7543-60
55	BE	14	T38	380	7304-7543-60
↑44,5 ←64→ ↑44,5 18	BE	14	T38	446	7304-7500-60
L					
Ingersoll-Rand YH 65, YH 80					
	BE	19	T38	495	7304-7525-19
	BE	19	T45	500	7305-7525-19
64	DL	19	140	300	7303-7323-19
13 13					
Ingersoll-Rand YH 80 A					
	BE	19	T45	495	7305-7559-19
+	52	.0		.00	1000 1000 10
O 64					
↑46 ← 85 → ↑51					
L 13					
Ingersoll-Rand YH 65 RP, YH 70 RP, YH 75 RP, YH 80 RP					
	BE	19	T45	700	7305-7546-19
65					
†46 110 145 145					
140					
L					
Klemm 4053					
1 ★ 1 - - - - - - - - - -	BE	-	R55	500	7805-6015 ¹⁾
	BE	-	R55	500	7805-7015 ²⁾
75					
↑56 154 ↑56 10 10 10 10 10 10 10 10 10 10 10 10 10 	A) ¹⁾ LH-Rotat	ion		
L		2) RH-Rota			

Montabert

	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
Montabert HC40					
↓	BE	-	R32	447	7803-4725-01
53	BE	-	R38	447	7804-4725-01
+U+ +	BE	-	T38	447	7304-4725-01
Montabert HC40 (female) ↑ 38					
1	TU, BO	_	R32	270	7803-4726-01
45 L 8	,				
Montabert HC 80, HC 90, HC 105					
→	TU	-	R38	440	7804-4720-01
53	TU	-	T38	440	7304-4720-01
→ 94 → ↑ 38					
Montabert H 100					
<u> </u>	BE	14	T38	537	7304-7502-60
13 44,5					
Montabert HC 80R, HC 105R, HC 107R, HC 108R, HC 109R					
40 145	_ BE 	-	T38	670	7304-7544-01
Montabert HC 80, HC 120					
↓	BE	-	T45	490	7305-7520-01
92 → ¹ 45 ₉					
Montabert HC 120R, HC 150R, HC 155R, HC 158R					
	BE	-	T51	670	7306-7528-02
91 →					
Montabert HC 200A					
 	BE	_	T51	840	7306-7530-02
1000000	BE	_	GT60	840	7600-7530-02
129 L 11					

SIG

	Applica- tion	Flushing hole (mm)	Thread	Length (mm)	Part No.
SIG HBM 50, 100 and 120	ВО	-	R32	340	7803-3588-01
SIG HBM 100 and 120 1 34 -58 - 55 9	TU, B0	-	R38	340	7804-3575-01
SIG HBM 50, 100 and 120	BE, DS	-	R32	550	7803-3576-01
SIG 101	BE	-	R32	500	7803-3591-01



WHEN EVERY MINUTE COUNTS, "THE RIGHT TOOLS FOR THE RIGHT JOB"

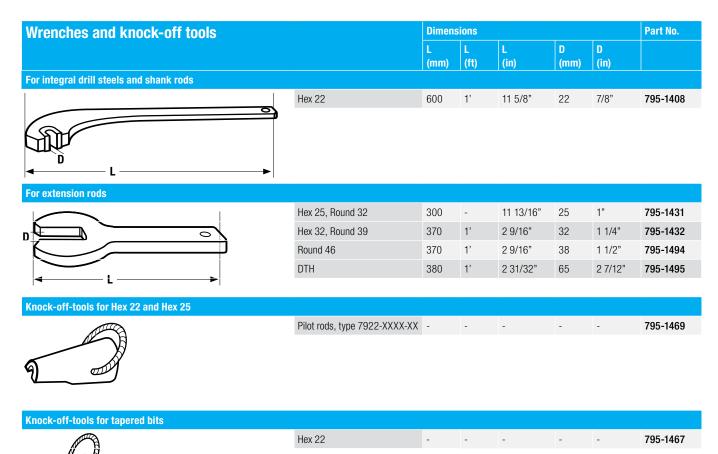
Auxiliary tools are an important part of the drilling application; that's why we apply top grade tools to keep the process going and avoid further downtime. Sandvik accessories for Top Hammer Drilling tools are simple, practical additions. Their purpose is to enable the tool system to be tailored to meet different demands in different applications and working environment. Additional, Sandvik auxiliary tools optimize the system providing higher productivity, reliability and lower operating costs with minimal environmental impact.

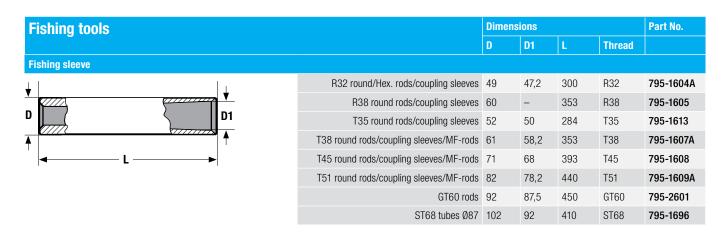
BIT ADAPTERS	96
REDUCTION COUPLINGS	96
WRENCHES	97
KNOCK-OFF TOOLS / FISHING TOOLS	97
THREAD GREASE AND GAUGES	98
DRILL STEEL STRAIGHTENER	98

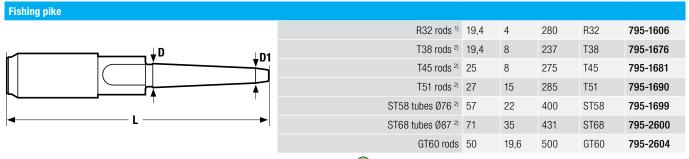
AUXILIARY TOOLS

Bit adapters	Wrench flat	Threads		Dimension	IS			Part No.
	(mm)	F (Female)	M (Male)	L (mm)	L (in)	D (mm)	D (in)	
↓	28,5	R23	R32	200	7 7/8"	35	1 3/8"	7837-3301
	38	R25	R32	173	6 13/16"	45	1 3/4"	7832-3301
F ↑D L M	38	R28	R32	230	9 1/16"	40	1 37/64"	7839-3301
	38	R32	T38	225	8 55/64"	45	1 49/64"	7833-4401
	38	R32	R38	225	8 55/64"	45	1 49/64"	7833-4301
	38	T35	T38	250	9 27/32"	48	1 7/8"	7337-4401
	44,5	R38	R32	270	10 41/64"	55	2 5/32"	7834-3303
	44,5	R38	T38	245	9 21/32"	55	2 5/32"	7834-4401
	44,5	T38	R32	270	10 41/64"	57	2 1/4"	7334-3301
	44,5 44,5	T38 T38	T45 R38	285 280	11 7/32" 11 1/32"	57 57	2 1/4"	7334-5401 7334-4301
	38	T45	T38	265	10 7/16"	63	2 31/64"	7335-4401
	44,5	T45	T51	285	11 7/32"	63	2 31/64"	7335-6401
	44,5	T51	T45	285	11 7/32"	71	2 51/64"	7336-5401
Reduction couplings		Threads		Dimension)S			Part No.
		F1	F2	L (mm)	L (in)	D (mm)	D (in)	
1		R32	R28	165	6 1/2"	44	1 47/64"	7993-0444
CONTROL STATE		R32	R25	160	6 1/4"	43	1 11/16"	7993-2443
D		R38	R32	170	6 3/4"	55	2 5/32"	7994-3455
F1		T38	R32	195	7 11/16"	55	2 5/32"	7314-3555
		T38	R38	185	7 9/32"	55	2 5/32"	7314-4455
		T38 T38	T45	180 180	8 43/64"	58 61	2 9/32" 2 13/32"	7314-6258 7314-6261
				1				
		T51	T45	218	8 19/32"	71	2 51/64"	7316-6271

AUXILIARY TOOLS







1) Without flushing hole
2) With flushing hole

AUXILIARY TOOLS

Thread grease		Dimensions			Part No.
		D (mm)	L (mm)	Weight (kg)	
For integral drill steels and shank rods					
	Can	215	170	4,5	795-1960
	Can	300	380	18	795-1961
	Tube	53/57	235	0,4	795-1962
	Low temp. Can	300	380	18	795-1963
	Barrel	370	690	50	795-1967
	Barrel	610	870	240	795-1964

Gauges	Dimensions	Part No.
Gauges / Wear gauge for male and female threads		
	R22	795-1331
	R25	795-1332
	R32	795-1333
	R38	795-1334
Gauges / Chuck wear gauge		
	Hex 19	795-2301-19
	Hex 22	795-2301-22
	Hex 25	795-2301-25

Drill steel straightener	Prod. Info	Part No.
Drill steel straightener for Hex19 to Round 52		
	Manual/Hydraulic	796-2930
	Electric/Hydraulic, 380V/50Hz	796-2930-52
	Support leg, 1 piece	796-2931



INFORMATION

Grinding of Hardmetal - Health and Safety Information

Material Composition

Hardmetal products contain tungsten carbide and cobalt.

Routes of exposure

Grinding or heating hardmetal blanks or hardmetal products will produce dusts or fumes with dangerous ingredients that can be inhaled, swallowed or come in contact with the skin or eyes.

Acute toxicity

The dust is toxic by inhalation. Inhalation may cause irritation and inflammation in the airways. Skin contact can cause irritation and rash. Sensitized persons may experience an allergic reaction.

Chronic toxicity

Repeated inhalation of aerosols containing cobalt may cause obstruction in the airways. Prolonged inhalation of increased concentrations may cause lung fibrosis or lung cancer. Epidemiological studies indicate that workers exposed in the past to high concentrations of tungsten carbide/cobalt carried an increased risk of developing lung cancer.

Cobalt and nickel are potent skip sensitizers. Repeated or prolonged contact can cause sensitization.

Classification

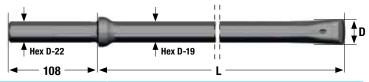
- Following hazard classification according to GHS/CLP applies to the hardmetal powder (2.5%≤Co<25%):
- Acute Inhalation 3, H331: Toxic if inhaled
- Carc. Cat. 2, H351: Suspected of causing cancer by inhalation
- Repr. 2, H361; Suspected of damaging fertility.
- STOT RE I, H372: Causes damage to lungs through prolonged or repeated exposure by inhalation
- Resp. Sens. IB, H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
- Skin Sens. I, H317: May cause an allergic skin reaction
- Eye Irrit. 2, H319: Causes serious eye irritation
- Aquatic Acute I, H400: Very toxic to aquatic life
- Aquatic Chronic 2, H411: Toxic to aquatic life with long lasting effects

Precautionary Statements

- · Do not breathe dust
- Wear protective gloves/protective clothing/eye protection.
- Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection
- Avoid release to the environment
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
- If skin irritation or rash occurs: Get medical advice/attention

CODE KEY INTEGRAL DRILL STEELS

7XX - YYZZ - QQ



Main code 7XX	Sub code YYZZ	3:rd code group QQ
714 = 22x108 shank, Hex 22 chisel	YY = effective length in dm ZZ = bit diameter in mm	50 = insert height 17 mm 65 = insert height 19 mm
724 = 19x108 shank, Hex 19 chisel	YY = effective length in dm ZZ = bit diameter in mm	
728 = 22x108 shank, Hex 19 chisel	YY = effective length in dm ZZ = bit diameter in mm	

CODE KEY TAPERED BITS

7XXX - YYZZ - QQ

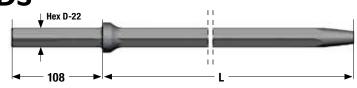




Main code 7XX	Sub code YYZZ	3:rd code group QQ
7770 = 12deg Long skirt 7776 = 11deg 7788 = 7deq	YY = 19, 3 gauge buttons YY = 44/52 Normal,5 gauge buttons YY = 54.6 gauge buttons	(Q) = S spherical buttons (Q) = B ballistic buttons
7795 = 12deg Short skirt	YY = 64 Normal, 4 gauge buttons YY = 90 Cross bit HD	QQ = 42 CC-grade 442 (inserts) QQ = 48 CC-grade XT48 (buttons)
	ZZ = Bit diameter in mm	

CODE KEY TAPERED RODS

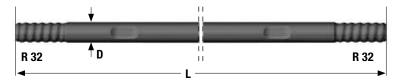
7XXX - YYZZ - QQ



Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7870 = 12deg 7876 = 11deg 7888 = 7deg	YY = 11 HF hardened , Sanbar 20 YY = 51 HF hardened , Sanbar 61 YY = 61 Carburized, Sanbar 64	11 = no packing
	ZZ = approximate length in dm	

CODE KEY EXTENSION RODS

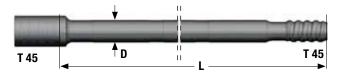
7XXX - YYZZ - QQ



Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7851 = R22 7852 = R25 7853 = R32 7854 = R38 7857 = R23	YY = 13 Hex22 YY = 23 Hex25 YY = 33 Round33 YY = 43 Round39 ZZ = approximate length in dm	20 = Carburized 30 = HF-hardened
7324 = T38 7325 = T45 7326 = T51	YY = 43 Round39 YY = 73 Round46 YY = 53 Round52 ZZ = approximate length in dm	20 = Carburized 30 = HF-hardened

CODE KEY MF RODS

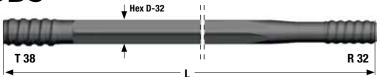
7XXX - YYZZ - QQ



Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7853 = R32 7857 = R23	YY = 48 Hex22 YY = 51 Round32 ZZ = approximate length in dm	20 = Carburized
7324 = T38 7325 = T45 7326 = T51 7327 = T35 7610 = GT60	YY = 47 Round39 YY = 77 Round46 YY = 55 Round52 YY = 11 Round60 YY = 14 Round60, for 92mm bits ZZ = approximate length in dm	20 = Carburized 70 = Sandvik Tough

CODE KEY DRIFTER RODS

7XXX - YYZZ - Q



Main code 7XXX	Subcode YY ZZ = approximate lei	ngth in dm		3:rd code group Q
7853 = R32 shank end 7854 = R38 shank end 7324 = T38 shank end 7327 = T35 shank end	Code 24 30 76 87 65 86 96 67 70 72 85 52	Steel Section Hex25 Hex28 Hex28 Hex32 MF-drifter Hex35 Hex32 Hex35 Round39 Round39 Hex35 MF-drifter Round39	Bit thread R25 R25 R28 R28 R32 R32 R32 R32 R32 R35 R35 R35	20 = Carburized

CODE KEY SHANK RODS AND SHANK ADAPTERS

7XXX - YYZZ - QQ





Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7801 = R22 7802 = R25 7803 = R32 7804 = R38 7807 = R23 7814 = α250 7304 = T38 7305 = T45 7306 = T51 7307 = T35 7328 = ST58 7329 = ST68 7600 = GT60	Shank rods: YY = 61 Hex22 YY = 71 Hex25 ZZ = approximate length in dm	Shank rods: 11= shank H22X108, no packing 21=shank H25X159, no packing 30= Shank H25x108, no packing Shank adapters: 01,02,03,05 = separate flushing 19 = 19mm packing 23 = 23mm packing 30 = 10mm packing 40 = 11mm packing 50 = 12,7mm packing 60/61 = 14mm packing 80 = 16mm packing

CODE KEY DRIFTER BITS

7XXX - YYZZ - (Q) QQ





Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7731 = R22 7732 = R25 7733 = R32 7737 = R23	YY = 10 Cross bit Normal YY = 13/14 Cross bit HD YY = 16 Normal bit with 6 gauge buttons YY = 44 Normal bit 5 gauge buttons	(Q) = S spherical buttons (Q) = R ballistic buttons (Q) = C conical buttons
7738 = R35 7739 = R28 7764 = α 250 7767 = α 330	YY = 52 HD bit 5 gauge buttons YY = 53 Normal bit 6 gauge buttons YY = 54 Normal bit 6 gauge buttons ZZ = Bit diameter in mm	QQ = 11 CC-grade 411 (inserts) QQ = 42 CC-grade 442 (inserts) QQ = 48 CC-grade XT48 (buttons) QQ = 55 CC-grade DP55 (buttons) QQ = 65 CC-grade DP65 (buttons)

CODE KEY BIG THREADED BITS

7XXX - YYZZ - (Q) QQ





Main code 7XXX	Sub code YYZZ	3:rd code group QQ
7734 = R38 7514 = T38 7515 = T45 7516 = T51 7517 = T35 7620 = GT60	YY = 16 HD bit 6 gauge buttons YY = 18 HD bit 8 gauge buttons YY = 19 HD bit 9 gauge buttons YY = 26 Button bit Normal YY = 38 Button bit HD YY = 40 HD X-bit YY = 46 HD retrac bit 6 gauge buttons YY = 48 HD retrac bit 8 gauge buttons YY = 49 HD retrac bit 9 gauge buttons YY = 78 Retrac bit with buttons ZZ = Bit diameter in mm	(Q) = S spherical buttons (Q) = R ballistic buttons QQ = 11 CC-grade 411 (inserts) QQ = 42 CC-grade 442 (inserts) QQ = 48 CC-grade XT48 (buttons) QQ = 55 CC-grade DP55 (buttons) QQ = 65 CC-grade DP65 (buttons)

CODE KEY COUPLINGS

7XXX - YYZZ



Main code 7XXX	Sub code YYZZ
7991 = R22	YY = 04 R28 adapter thread
7992 = R25	YY = 20 Tough hardened, same thread both ends
7993 = R32	YY = 24 R25 adapter thread
7994 = R38	YY = 33 Tough hardened, same thread both ends
7314 = T38	YY = 34/35 R32 adapter thread
7315 = T45	YY = 36 Carburized, same thread both ends
7316 = T51	YY = 44 R38 adapter thread
7317 = T35	YY = 52 T38 Adapter thread
	YY = 62 T45 adapter thread
	ZZ = Outer diameter in mm

CODE KEY BIT ADAPTERS

7XXX - YY0I



Main code 7XXX	Sub code YYZZ
7832 = R25 internal thread	YY = 33 R32 external thread
7833 = R32 internal thread	YY = 43 R38 external thread
7834 = R38 internal thread	YY = 44 T38 external thread
7837 = R23 internal thread	YY = 54 T45 external thread
7839 = R28 internal thread	YY = 64 T51 external thread
7334 = T38 internal thread	
7335 = T45 internal thread	
7336 = T51 internal thread	
7337 = T35 internal thread	

Part No.	Weight (kg)	Page	Part No.	Weight (kg)	Page	Part No.	Weight (kg)	Page
714-0434-65	1,8	19	721-2020	0,8	25	7304-7526-80	6,3	89
714-0635-65	2,5	19	721-2420	0,8	25	7304-7531-01	4,0	78
714-0641-65	2,5	19	721-2820	0,9	25	7304-7532-01	5,9	80
714-0829	3,0	19	721-3120	1,0	25	7304-7535-02	4,6	78
714-0833-65	3,0	19	724-0424	1,3	18	7304-7536-01	4,3	78
714-0834-65	3,0	19	724-0429	1,3	18	7304-7537-01	5,5	80
714-0840-65	3,1	19	724-0627	1,7	18	7304-7541-02	6,6	80
714-1232-65	4,3	19	724-0823	2,1	18	7304-7543-60	3,6	89, 90
714-1234-65	4,3	19	724-0828	2,2	18	7304-7544-01	7,3	91
714-1240-65	4,3	19	724-1226	3,0	18	7304-7554-01	5,3	78
714-1628-50	5,4	19	724-1627	5,0	18	7304-7557-01	5,6	78
714-1631	5,5	19	724-2426	5,7	18	7304-7576-01	6,9	80
714-1633-65	5,5	19	728-0424	1,4	18	7304-7577-02	8,4	80
714-1639-65	5,5	19	728-0429	1,4	18	7304-7581-60	5,2	89
714-1833-65	6,1	19	728-0828	2,3	18	7304-7583-40	5,8	83
714-1839-65	6,1	19	728-1627	3,9	18	7304-7585-01	5,3	79
714-2030	6,5	19	7304-3550-01	5,4	86	7304-7586-01	5,7	79
714-2033-65	6,6	19	7304-3590-03	4,1	83, 85, 86	7304-7664-01	6,4	79
714-2427-50	7,9	19	7304-3591-01	4,8	83, 85, 86	7304-7666-01	6,5	79
714-2432-65	7,9	19	7304-3593-01	4,7	85, 86	7304-7668-01	7,0	79
714-2438-65	7,9	19	7304-3652-01	3,8	86	7304-7669-01	5,6	79
714-3231	10	19	7304-3655-01	6,2	87	7304-7671-01	7,7	79
714-3237-65	10	19	7304-3656-01	4,5	86	7304-7672-01	3,5	77
714-4030	13	19	7304-3666-01	3,9	87	7304-7673-01	7,0	79
714-4036-65	13	19	7304-3690-02	6,7	87	7304-7685-01	7,0	79
714-4829	15	19	7304-3825-02	9,9	87	7305-3591-01	5,1	85, 86
714-4835-65	15	19	7304-4200-30	3,0	84	7305-3593-01	5,8	85, 86
714-5628-50	18	19	7304-4500-60	2,8	84	7305-3655-01	6,5	87
714-5634-65	18	19	7304-4700-01	4,0	78	7305-3667-01	4,5	87
714-6427-50	20	19	7304-4700-50	3,3	77	7305-3690-02	6,9	87
714-6433-65	20	19	7304-4706-01	4,7	78	7305-3826-02	10	87
714-7226-50	23	19	7304-4720-01	3,8	91	7305-4791-01	6,3	89
714-7232-65	23	19	7304-4725-01	3,6	91	7305-6008-01	8,9	81
714-8026-50	25	19	7304-4780-01	6,4	89	7305-6010-01	9,7	81
714-8825-5005	27	19	7304-4791-01	6,0	89	7305-7400-01	9,1	80
714-9625-5005	30	19	7304-4993-01	5,5	88	7305-7414-01	8,9	89
721-1517	0,6	25	7304-7426-01	6,3	89	7305-7417-01	9,5	89
721-1620	0,7	25	7304-7500-60	4,0	83, 89, 90	7305-7520-01	5,6	91
721-1622	0,7	25	7304-7502-60	5,4	84, 91	7305-7525-19	5,5	90
721-1922	0,8	25	7304-7525-19	5,4	90	7305-7526-80	6,6	89

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7305-7532-01	6,3	80	7307-7671-01	7,4	79	7324-8637-20	26	36
7305-7537-01	5,8	80	7307-7673-01	7,0	79	7324-8643-20	28	36
7305-7541-02	6,9	80	7307-7685-01	7,0	79	7324-9631-20	24	36
7305-7546-19	7,8	90	7314-3355	2,0	52	7324-9637-20	28	36
7305-7551-01	7,6	80	7314-3555	2,3	96	7324-9643-20	32	36
7305-7557-01	5,9	78	7314-3652	1,6	36, 40, 41	7324-9649-20	37	36
7305-7559-19	6,1	90	7314-4455	1,9	96	7324-9655-20	42	36
7305-7576-01	7,2	80	7314-6258	2,0	96	7324-9661-20	44	36
7305-7577-02	8,7	80	7314-6261	2,9	96	7324-9664-20	46	36
7305-7586-01	6,2	79	7315-3663	2,7	54	7325-7331C-30	33	54, 56
7306-3655-02	6,8	87	7316-3671	3,7	56	7325-7337C-30	40	54, 56
7306-3689-01	11	87	7316-3676	4,6	56	7325-7343C-30	47	54, 56
7306-3690-03	7,2	87	7316-6271	4,0	96	7325-7712C-20	14	68
7306-3692-01	9,5	87	7324-4331C-30	24	52	7325-7715C-20	18	68
7306-3699-01	14	87	7324-4337C-30	29	52	7325-7718C-20	21	68
7306-6008-01	9,3	81	7324-4712C-20	11	66	7325-7731-70	35	54
7306-6010-02	10	81	7324-4715C-20	12	66	7325-7737-70	41	54
7306-6014-02	12	81	7324-4718C-20	15	66	7325-7743-70	48	54
7306-6021-02	11	82	7324-4731-70	25	52	7325-7761-70	70	54
7306-6022-02	13	82	7324-4737-70	30	52	7326-5515C-20	23	70
7306-6025-02	16	81	7324-4743-70	36	52	7326-5518C-20	27	70
7306-7400-02	8,9	80	7324-6537-20	29	36	7326-5537-70	50	56
7306-7528-02	8,9	91	7324-6543-20	34	36	7326-5543-70	57	56
7306-7530-02	16	91	7324-6731-20	25	39	7326-5561-70	87	56
7306-7551-02	8,1	80	7324-6737-20	29	39	7327-4718-20	16	64
7306-7577-03	8,8	80	7324-6743-20	34	39	7327-4731-20	25	43, 50
7307-3593-01	4,5	86	7324-6749-20	39	39	7327-4737-20	32	43, 50
7307-3652-01	3,7	86	7324-6755-20	44	39	7327-4743-20	35	43
7307-3656-01	4,2	86	7324-6931-20	18	52	7327-4749-20	40	43
7307-3668-01	4,5	87	7324-7049-20	44	39	7327-5243-20	35	43
7307-3671-01	4,9	87	7324-7055-20	50	39	7327-5249-20	40	43
7307-3690-01	6,9	87	7324-7061-20	57	39	7327-5255-20	45	43
7307-7535-02	4,5	78	7324-7064-20	57	39	7327-5261-20	50	43
7307-7557-01	5,6	78	7324-7243-20	35	41	7328-3720-01	26	88
7307-7566-01	4,9	78	7324-7249-20	40	41	7328-6009-02	17	81
7307-7585-01	5,3	79	7324-7255-20	45	41	7328-6020-01	17	82
7307-7586-01	5,6	79	7324-7261-20	49	41	7328-6035-01	22	82
7307-7664-01	6,4	79	7324-8543-20	34	41	7329-3720-01	27	88
7307-7666-01	6,5	79	7324-8549-20	37	41	7329-6009-02	17	81
7307-7668-01	7,0	79	7324-8555-20	42	41	7329-6020-05	18	82

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7329-6035-05	22	82	7515-1902-S48	4,0	53, 67	7528-8489-R65	4,0	72
7334-3301	2,6	96	7515-2676A-S48	2,5	53, 67	7529-5604A-S65	30	73
7334-4301	3,4	96	7515-2689A-S48	3,1	53, 67	7529-5652C-S65	15	73
7334-5401	3,3	96	7515-4870-R48	2,7	53, 67	7529-6652-S48	9,0	73
7335-4401	2,9	96	7515-4876-R48	3,0	53, 67	7529-6902-S65	5,2	73
7335-6401	3,7	96	7515-4876-S48	3,0	53, 67	7529-7302-R65	5,5	73
7336-5401	3,8	96	7515-4889-R48	4,8	53, 67	7529-7315-R65	7,5	73
7337-4401	1,9	96	7515-4889-S48	4,8	53, 67	7529-8402-R65	5,2	73
7358-6014-01	13	81	7515-4902-R48	6,9	53, 67	7529-8415-R65	5,9	73
7358-6025-02	17	81	7515-4902-\$48	6,8	53, 67	7600-3699-01	14	87
7378-7615-26	33	72	7515-5576A-C60	2,5	53, 67	7600-6014-02	13	81
7378-7618-26	41	72	7515-5627-S48	6,9	67	7600-6022-03	15	82
7379-8715-26	40	73	7515-5652-S48	9,0	67	7600-6025-02	17	81
7379-8715-46	40	73	7515-7876A-S48	3,0	53, 67	7600-6030-05	21	82
7379-8718-26	47	73	7515-7889A-S48	4,4	53, 67	7600-6031-01	21	81
7379-8718-46	48	73	7516-1889-R48	3,6	55, 69	7600-6032-05	24	82
7514-1664-R48	1,7	51, 65	7516-1889-S48	3,6	55, 69	7600-7530-02	17	91
7514-1664-S48	1,7	51, 65	7516-1902-R48	4,6	55, 69	7610-1137-70	73	58
7514-1870-S48	1,9	51, 65	7516-1902-S48	4,5	55, 69	7610-1143-70	86	58
7514-1876-R48	2,3	51, 65	7516-1915-S48	6,0	55, 69	7610-1161-70	120	58
7514-1876-S48	2,2	51, 65	7516-1927-S48	6,6	55, 69	7610-1243-70	92	58
7514-1889-S48	3,0	51, 65	7516-2602A-S48	4,3	55, 69	7610-1443-70	84	58
7514-2664A-S48	1,7	51, 65	7516-2689A-S48	3,6	55, 69	7620-1892-S48	5,2	57
7514-2676A-S48	2,3	51, 65	7516-4889-R48	4,3	55, 69	7620-1896-S48	5,3	57
7514-4064-11	2,1	51, 65	7516-4889-S48	4,5	55, 69	7620-1902-S48	6,5	57
7514-4664-S48	2,2	51, 65	7516-4902-R48	6,3	55, 69	7620-1915-S48	7,8	57
7514-4864-R48	2,0	51, 65	7516-4902-S48	6,3	55, 69	7620-1927-S48	9,4	57
7514-4870-S48	3,1	51, 65	7516-4915-R48	8,4	55, 69	7620-1940-S48	12	57
7514-4876-R48	3,5	51, 65	7516-4915-S48	8,3	55, 69	7620-1952-S48	14	57
7514-4876-S48	3,5	51, 65	7516-4927-S48	11	55, 69	7620-4902-S48	7,6	57
7514-5564A-C60	1,7	51, 65	7516-5652-S48	9,3	69	7620-4915-R48	9,4	57
7514-5576A-C60	2,2	51, 65	7516-7802-S48	5,7	55, 69	7620-4915-S48	9,6	57
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7514-7876A-S48	3,0	51, 65	7517-1654A-S48	1,0	50, 64	7620-4940-S48	16	57
7515-1870-S48	2,3	53, 67	7517-4654-R48	1,3	50, 64	7620-4952-S48	19	57
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7515-1889-R48	3,1	53, 67	7528-5652-S65	13	72	7620-8792-R48	6,1	57
7515-1889-S48	3,2	53, 67	7528-6989-S65	4,5	72	7620-8792-S48	6,1	57

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7640-7653-70	112	58	7733-5348A-S48	0,9	35	7767-5348A-R48	0,9	38
7640-8743-70	106	58	7733-5443B-R48	0,7	35	7767-5348A-S48	0,9	38
7660-8743-71	104	58	7733-5445B-R48	0,8	35	7767-5443B-R48	0,7	38
7721-4802-S48	2,1	37, 40, 42	7733-5545A-C60	0,8	35	7767-5445B-R48	0,8	38
7721-4827-S48	3,6	37, 40, 42	7733-5551A-C60	0,8	35, 48, 62	7767-5602P-S48	3,2	40
7721-4889-S48	1,5	37, 40, 42	7733-5557A-C60	1,2	48, 62	7770-4433-B48	0,3	21
7722-4864-S48	0,9	20, 33, 34, 37	7733-5564A-C60	1,3	48, 62	7770-4435-B48	0,3	21
7722-4876-S48	1,3	20, 33, 34, 37	7733-5602P-S48	2,9	37	7770-5233-B48	0,3	21
7722-4889-S48	1,7	20, 33, 34, 37	7737-4433-R48	0,4	27	7770-5235-B48	0,3	21
7723-4802-S48	3,6	63, 66	7737-5235-R48	0,4	27	7770-5433-B48	0,2	21
7723-4827-S48	5,2	63, 66	7737-5238A-R48	0,4	27	7770-9030-42	0,3	21
7731-1038-42	0,5	26	7737-5241-R48	0,5	27	7770-9032-42	0,3	21
7732-1435-42	0,5	32	7737-5345-R48	0,5	27	7770-9035-42	0,4	21
7732-4433C-S48	0,4	32	7738-1448-42	1,0	41	7776-1938-B48	0,2	23
7732-4435-S48	0,4	28, 32	7738-1651A-R48	1,0	41	7776-1940-B48	0,3	23
7732-4437C-S48	0,5	32	7738-1651A-S48	0,9	41	7776-4432-B48	0,3	23
7732-5235-R48	0,4	28	7738-4654A1-R48	1,3	43	7776-4435-B48	0,3	23
7732-5238-R48	0,5	28, 32	7738-5348A-R48	1,0	41	7776-4436-B48	0,2	23
7732-5238-S48	0,5	28, 32	7738-5348A-S48	1,0	41	7776-4438-B48	0,3	23
7732-5241-R48	0,5	28	7738-5602P-S48	3,2	42	7776-4440-B48	0,3	23
7732-5241-S48	0,5	28, 32	7739-1438-42	0,6	34	7788-5232-B48	0,3	24
7732-5345F-R48	0,7	28	7739-5237-S48	0,5	34	7788-5233-B48	0,3	24
7733-1345A-42	0,8	35	7739-5238-R48	0,6	34	7788-5235-B48	0,4	24
7733-1451-42	1,1	48, 62	7739-5238-S48	0,6	34	7788-5238-B48	0,3	24
7733-1651A-R48	1,0	35, 48, 62	7739-5241-S48	0,6	34	7795-5232-B48	0,2	21
7733-1651A-S48	0,9	35, 48, 62	7739-5243-\$48	0,7	34	7795-5235-B48	0,3	21
7733-1657A-S48	1,2	35, 48, 62	7764-5238-R48	0,5	29	7795-5238-B48	0,3	21
7733-1664-S48	1,7	35, 48, 62	7764-5345F-R48	0,7	29	7795-6428-B48	0,2	21
7733-1876-S48	1,8	35, 48, 62	7767-1345A-42	0,8	38	7795-6430-B48	0,2	21
7733-4651-R48	1,2	48, 62	7767-1651A-R48	1,0	38	7801-6103-11	1,1	26, 76
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7733-5243A-S48	0,7	35	7767-1876-S48	1,7	38	7802-6110-11	3,5	28
7733-5245A-S48	0,8	35	7767-4651A-S48	1,1	38	7802-7103-14	1,4	76
7733-5248A-S48	0,9	35	7767-5243A-S48	0,7	38	7802-7103-21	1,6	76
7733-5251A-S48	1,0	35	7767-5245A-S48	0,8	38	7802-7567-01	1,0	77
7733-5343A-R48	0,7	35	7767-5248A-S48	0,8	38	7803-3100-30	2,0	84
7733-5345A-R48	0,8	35	7767-5343A-R48	0,7	38	7803-3576-01	4,8	85, 92
7733-5345A-S48	0,8	35	7767-5345A-R48	0,8	38	7803-3581-01	2,5	85

Part No.	Weight (kg)	Page	Part No.	Weight (kg)	Page	Part No.	Weight (kg)	Page
7803-3583-01	3,0	85	7804-7536-01	4,4	78	7852-2331-20	12	28
7803-3588-01	3,4	84, 92	7804-7554-01	5,2	78	7853-2418-20	6,9	32
7803-3590-03	3,9	83, 85	7804-7585-01	5,3	79	7853-2421-20	8,4	32
7803-3591-01	4,1	83, 85, 86, 92	7805-6015	10	90	7853-2424-20	9,5	32
7803-3593-01	4,6	85, 86	7805-7015	10	90	7853-2426-20	10	32
7803-3602-30	2,1	77	7807-6103-11	1,1	27, 76	7853-2427-20	11	32
7803-3652-01	3,7	86	7807-6108-11	3,0	27	7853-2429-20	16	32
7803-3656-01	4,1	86	7807-6116-11	5,0	27	7853-2431-20	12	32
7803-3670-02	4,7	86	7807-6124-11	7,7	27	7853-2433-20	12	32
7803-4200-30	2,6	84	7807-6132-11	12	27	7853-2437-20	14	32
803-4700-01	3,7	78	7807-6136-11	13	27	7853-3309-20	4,8	63
7803-4700-50	2,7	77	7807-7103-30	1,3	27, 76	7853-3312-20	6,3	63
7803-4703-01	3,7	83	7807-7136-30	18	27	7853-3315-20	8,0	63
7803-4725-01	3,3	91	7807-7567-01	1,0	77	7853-3318-20	9,8	63
7803-4726-01	2,8	91	7807-7570-01	0,9	77	7853-3324-30	13	49
7803-7500-61	3,0	83, 89, 90	7809-7547-01	2,7	77	7853-3331-30	16	49
'803-7531-01	3,9	78	7814-7136-30	14	29	7853-3337-30	20	49
803-7532-01	5,7	80	7821-3440	2,8	37	7853-5109-20	5,5	63
803-7535-02	4,2	78	7821-5440	2,7	42	7853-5112-20	7,5	63
803-7543-60	4,1	90	7821-6740	2,7	40	7853-5115-20	9,1	63
803-7547-01	2,6	77	7822-1526	1,9	34	7853-5118-20	11	63
7803-7549-01	2,6	77	7822-2526	1,3	33	7853-5131-20	18	49
803-7553-01	3,9	78	7822-3526	1,5	37	7853-5137-20	21	49
7803-7557-01	5,4	78	7823-2647	4,6	66	7853-7624-20	12	34
7803-7585-01	5,1	79	7823-3647	4,4	63	7853-7627-20	14	34
803-7586-01	5,4	79	7832-3301	1,2	96	7853-7631-20	15	34
7803-7663-01	2,0	77	7833-4301	1,8	96	7853-7637-20	20	34
7803-7664-01	5,7	79	7833-4401	1,9	96	7853-7643-20	21	34
7803-7685-01	7,0	79	7834-3303	2,5	96	7854-8631-20	20	36
7804-3575-01	4,1	84, 92	7834-4401	2,3	96	7854-8637-20	24	36
7804-3590-03	4,1	83, 85, 86	7837-3301	1,0	96	7854-8643-20	27	36
7804-3652-01	3,9	86	7839-3301	1,4	96	7854-8649-20	31	36
7804-3670-02	4,3	86	7851-1308-20	2,4	26	7854-9631-20	24	36
804-4700-01	4,1	78	7851-1312-20	3,6	26	7854-9637-20	28	36
804-4720-01	3,9	91	7851-1316-20	4,8	26	7854-9643-20	33	36
804-4725-01	3,8	91	7852-2309-20	3,6	28	7854-9649-20	37	36
804-4993-01	5,5	88	7852-2312-20	4,6	28	7854-9655-20	42	36
7804-7500-60	3,5	90	7852-2315-20	5,7	28	7857-4821-20	6,4	27
7804-7531-01	4,2	78	7852-2318-20	6,9	28	7857-4831-20	10	27
7804-7535-02	4,5	78	7852-2324-20	9,0	28	7870-1140-11	13	22

Part No.

7985-6315-26

7985-6318-26

7991-2031

7992-2035

7993-0444

7993-2443

7993-3644

7994-3455

7994-3655

Weight

(kg)

28

32

0,5

0,7

1,2

1,1

0,9

1,9

1,7

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28

96

96

96

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32, 34, 49, 63

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7870-1144-11	14	22	795-1469	4,4	97
7870-1148-11	15	22	795-1494	3,5	97
7870-1156-11	18	22	795-1495	5,2	97
7870-1164-11	20	22	795-1604A	1,9	97
7870-1172-11	23	22	795-1605	3,9	97
7870-1180-11	25	22	795-1606	0,6	97
7870-1188-11	27	22	795-1607A	3,9	97
7870-5124-11	7,9	22	795-1608	6,0	97
7870-5132-11	10	22	795-1609A	8,4	97
7870-6106-11	2,2	22	795-1613	1,7	97
7870-6112-11	4,1	22	795-1676	0,9	97
7870-6118-11	6,0	22	795-1681	1,5	97
7870-6120-11	6,5	22	795-1690	2,0	97
7870-6124-11	7,8	22	795-1696	11	97
7870-6131-11	9,5	22	795-1699	4,9	97
7870-6132-11	10	22	795-1960	4,9	98
7870-6137-11	11	22	795-1961	18	98
7876-6106-11	2,2	23	795-1962	0,6	98
7876-6108-11	2,7	23	795-1963	18	98
7876-6112-11	4,1	23	795-1964	240	98
7876-6116-11	5,0	23	795-1967	50	98
7876-6118-11	5,9	23	795-2301-19	0,0	98
7876-6120-11	6,5	23	795-2301-22	0,0	98
7876-6124-11	7,8	23	795-2301-25	0,0	98
7876-6131-11	9,6	23	795-2600	6,6	97
7876-6136-11	11	23	795-2601	10	97
7888-6124-11	7,6	24	795-2604	10	97
7888-6132-11	8,3	24	7953-4618-20	16	63
7922-6108-11	3,3	20	7953-4631-20	24	49
7922-6112-11	4,7	20	7955-5618-20	18	66
7922-6120-11	7,0	20	7955-5637-20	48	52
7922-6124-11	7,9	20	7956-6318-21	28	68
795-1331	0,2	98	7956-6337-70	46	54
795-1332	0,3	98	7956-7637-70	78	54
795-1333	0,4	98	7957-7618-20	40	70
795-1334	0,5	98	7957-7637-70	76	56
795-1408	3,1	97	7957-8737-70	89	56
795-1431	3,5	97	796-2930	50	98
795-1432	3,5	97	796-2930-52	60	98
795-1467	1,1	97	796-2931	5,0	98

NOTES



